User's Manual

DXA170
DAQStudio

vigilantplant.®

YOKOGAWA
Yokogawa Electric Corporation

IM 04L41B01-62EN
5th Edition

User Registration

Thank you for purchasing YOKOGAWA products.

We invite you to register your products in order to receive the most up to date product information. To register, visit the following URL.

http://www.yokogawa.com/ns/reg/

PRS 108-01E

Thank you for purchasing DAQStudio.
This manual explains the use of DAQStudio. Please read this manual carefully before use and use DAQStudio correctly.
After reading the manual, keep it safe at a location where it is easily available at the time of use. It will help you if you should not understand the handling during use.
Adobe Reader 7 or later of Adobe Systems Incorporated is required to display this manual.

Notes

- The contents of this manual are subject to change without prior notice.
- Every effort has been made in the preparation of this manual to ensure accuracy. However, if any questions arise or errors are found in this manual, please inform the nearest Yokogawa sales representative office.
- Copying or reproduction by any means of all or any part of the contents of this manual without permission is strictly prohibited.
- Transfer or loan of the software to a third party is prohibited.
- Once the software is unpacked, Yokogawa will not guarantee the designed operation of the software, except when the original floppy disk is found to be physically defective.
- Yokogawa will not accept any responsibility for damage caused directly or indirectly as result of use of this software.
- **The serial number will not be reissued, therefore, it must be kept in a safe place.**

Security Measures

To deal with security threats, we recommend that you take security measures.

- Apply restrictions to PC network connections.
  We recommend that you use an isolated network.
- Manage external media properly.
  Prevent malware intrusion through external media, unauthorized file operations on external media, and information leakage due to misplacement.
- Set a strong password and manage it properly.
  Use a password that is at least eight characters in length, and include three types of characters from uppercase letters, lowercase letters, numbers, and symbols.
  Change the password regularly.
- Install antivirus software.
  This software has been verified to work on a PC running Microsoft Forefront Client Security Ver. 1.5.1993.0.

Trademarks

- All YOKOGAWA product and brand names used in this manual are either trademarks or registered trademarks of Yokogawa Electric Corporation.
- vigilantplant, SMARTDAC+, Daqstation, and DXAdvanced are registered trademarks of Yokogawa Electric Corporation.
- Microsoft and Windows are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Adobe and Acrobat are registered trademarks or trademarks of Adobe Systems Incorporated.
- Company and product names that appear in this manual are registered trademarks or trademarks of their respective holders.
- The company and product names used in this manual are not accompanied by the registered trademark or trademark symbols (® and ™).

Revisions

1st Edition: January 2009
2nd Edition: April 2009
3rd Edition: March 2010
4th Edition: August 2010
5th Edition: May 2014

5th Edition: May 2014 (YK)
All Rights Reserved, Copyright © 2009 Yokogawa Electric Corporation

Terms and Conditions of the Software License

NOTICE - PLEASE READ CAREFULLY BEFORE USE

Thank you very much for purchasing this medium containing a software program and related documentation provided by Yokogawa Electric Corporation (hereinafter called "Yokogawa"), and the program contained, embedded, inserted or used in the medium (hereinafter called the "Yokogawa Software Program").
By installing the Yokogawa Software Program, you acknowledge that you understand and fully agree to the "Terms and Conditions of the Software License" (hereinafter called "Terms and Conditions") which is written in the documentation and separately attached. Accordingly, the Terms and Conditions bind you.
The Yokogawa Software Program and its related documentation including ownership of copyright shall remain the exclusive property of Yokogawa or those third parties who grants Yokogawa the rights.
Yokogawa hereby grants you permission to use the Yokogawa Software Program on the conditions that you agree to the Terms and Conditions before you install it in or onto a computer.

IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS, YOU CANNOT INSTALL THIS MEDIUM, AND MUST PROMPTLY RETURN IT TO YOKOGAWA OR ITS DESIGNATED PARTY.

Terms and Conditions of the Software License

Yokogawa Electric Corporation, a Japanese corporation (hereinafter called "Yokogawa"), grants permission to use this Yokogawa Software Program (hereinafter called the "Licensed Software") to you on the conditions that you agrees to the terms and conditions stipulated in Article 1 hereof.
You, as the Licensee (hereinafter called "Licensee"), shall agree to the following terms and conditions on the software license (hereinafter called the "Agreement") when the Licensed Software is installed by the Licensee.
Please note that Yokogawa grants the Licensee permission to use the Licensed Software under the terms and conditions herein and in no event shall Yokogawa intend to sell or transfer the Licensed Software to the Licensee.

Article 1 (Licensed Software under these Terms and Conditions)

1.1 The terms and conditions stipulated herein shall bind any Licensee who purchases the Licensed Software on the condition that the Licensee consents to agree to the terms and conditions stipulated herein.

1.2 The "Licensed Software" and required number of license herein shall be specified in the following paragraphs (1) and (2) respectively. The Licensed Software means and includes all applicable programs and documentation, without limitation, all proprietary technology, algorithms, a factor, invariant, process and/or other know-how contained therein. These terms and conditions shall also govern any additional software to the Licensed Software inclusive of its version-up or revision-up if Yokogawa provides them to the Licensee.
   (1) Licensed Software Name: DAQStudio (Model DXA170)
   (2) Number of License: 1

Article 2 (Grant of License)

2.1 Yokogawa grants the Licensee, for the purpose of single use, non-exclusive and non-transferable license of the Licensed Software with the license fee separately agreed upon by both parties.

2.2 The Licensee is, unless otherwise agreed upon in writing by Yokogawa, not entitled to change, sell, distribute, transfer, or sublicense the Licensed Software.

2.3 The Licensed Software shall not be copied in part or in whole except for keeping one (1) copy for back-up purpose. The Licensee shall secure or supervise the copy of the Licensed Software by the Licensee itself with great, strict, and due care.

2.4 The Licensed Software remains the exclusive property of Yokogawa and, if any, those of third parties from whom Yokogawa is sublicensed (hereinafter such third party's software is called "Third Party Software", which may include any software program made or coded by affiliates of Yokogawa). In no event shall the Licensee dump, reverse assemble, reverse compile, or reverse engineer the Licensed Software so that the Licensee may translate the Licensed Software into other programs or change it into a man-readable form from the source code of the Licensed Software. Unless otherwise separately agreed upon by Yokogawa, Yokogawa shall not provide the Licensee the source code for the Licensed Software.

2.5 The Licensed Software and its related documentation inclusive of its ownership of copyright shall be the proprietary property of Yokogawa or a third party who grants Yokogawa the rights. In no event shall the Licensee transfer, lease, sublicense, or assign any rights relating to the Licensed Software.

2.6 Yokogawa may use or add copy protection in or onto the Licensed Software. In no event shall, regardless of the purpose, the Licensee remove or attempt to remove such copy protection.

2.7 The Licensed Software may include the Third Party Software. In the case that Yokogawa is granted permission to sublicense to third parties by any licensors (sub-licensor) of the Third Party Software under different terms and conditions than those stipulated in this Agreement, the Licensee shall observe such terms and conditions of which Yokogawa notifies the Licensee in writing separately.

2.8 In no event shall the Licensee modify, remove or delete a copyright notice of Yokogawa and its licenser contained in the Licensed Software, including any copy thereof.

Article 3 (Restriction of Specific Use)

3.1 The Licensed Software shall not be intended specifically to be designed, developed, constructed, manufactured, distributed or maintained for the purpose of the following events:
   a) Operation of any aviation, vessel, or support of those operations from the ground;
   b) Operation of nuclear products, its facilities and/or radiation apparatus;,
   c) Operation of nuclear weapons, chemical weapons and/or biological weapons, or railroad; or
   d) Operation of medical instrumentation directly utilized for humankind or the human body.

3.2 Even if the Licensee uses the Licensed Software for the purposes in the preceding Paragraph 3.1, Yokogawa has no liability to or responsibility for any claims or damages arising out of the use or operations of the Licensed Software, and the Licensee agrees, on its own responsibility, to solve and settle the claims and damages and to defend, indemnify or hold Yokogawa totally harmless, from or against any liabilities, losses, damages and expenses (including fees for recalling the Products and reasonable attorney's fees and court costs), or claims arising out of and related to the above-said claims and damages.

Article 4 (Warranty)

4.1 The Licensee shall agree that the Licensed Software shall be provided to the Licensee on an "as is" basis when delivered. If defect(s), such as damage to the medium of the Licensed Software, attributable to Yokogawa is found, Yokogawa agrees to replace, free of charge, any Licensed Software on condition that the defective Licensed Software shall be returned to Yokogawa's specified authorized service facility within 12 month from the delivery of Yokogawa after opening the Package at the Licensee's expense. As the Licensed Software is provided to the Licensee on an "as is" basis when delivered, in no event shall Yokogawa warrant that any information on or in the Licensed Software, including without limitation, data on computer programs and program listings, be completely accurate, correct, reliable, or the most updated.

4.2 Notwithstanding the preceding Paragraph 4.1, when Third Party Software is included in the Licensed Software, the warranty period and related conditions that apply shall be those established by the provider of the third party software.

4.3 When Yokogawa decides in its own judgement that it is necessary, Yokogawa may from time to time provide the Licensee with Release Upgrades specified by Yokogawa (hereinafter called “Release Upgrades”).
4.4 Notwithstanding the preceding Paragraph 4.3, in no event shall Yokogawa provide Updates where the Licensee or any third party conducted renovation or improvement of the Licensed Software.
4.5 Correction of nonconformity in the manner and for the period of time provided above shall be the Licensee’s sole and exclusive remedy for any failure of Yokogawa to comply with its obligations and shall constitute fulfillment of all liabilities of Yokogawa and any third party licensing the Third Party Software to Yokogawa (including any liability for direct, indirect, special, incidental or consequential damages) whether in warranty, contract, tort (including negligence but excluding willful conduct or gross negligence by Yokogawa) or otherwise with respect to or arising out of the use of the Licensed Software.
4.6 THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF QUALITY AND PERFORMANCE, WRITTEN, ORAL, OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY YOKOGAWA AND ALL THIRD PARTIES LICENSING THIRD PARTY SOFTWARE TO YOKOGAWA.

Article 5 (Infringement)

5.1 If and when any third party should demand injunction, initiate a law suit, or demand compensation for damages against the Licensee under patent right (including utility model right, design patent, and trade mark), copyright, and any other rights relating to any of the Licensed Software, the Licensee shall promptly notify Yokogawa in writing to that effect.
5.2 In the case of the preceding Paragraph 5.1, the Licensee shall assign to Yokogawa all of the rights to defend the Licensee and to negotiate with the claiming party. Furthermore, the Licensee shall provide Yokogawa with necessary information or any other assistance for Yokogawa’s defense and negotiation. If and when such a claim should be attributable to Yokogawa, subject to the written notice to Yokogawa stated in the preceding Paragraph 5.1, Yokogawa shall defend the Licensee and negotiate with the claiming party at Yokogawa’s cost and expense and be responsible for the final settlement or judgment granted to the claiming party in the preceding Paragraph 5.1.
5.3 When any assertion or allegation of the infringement of the third party’s rights defined in Paragraph 5.1 is made, or when at Yokogawa’s judgment there is possibility of such assertion or allegation, Yokogawa will, at its own discretion, take any of the following countermeasures at Yokogawa’s cost and expense.
   a) To acquire the necessary right from a third party which has lawful ownership of the right so that the Licensee will be able to continue to use the Licensed Software;
   b) To replace the Licensed Software with an alternative one which avoids the infringement; or
   c) To remodel the Licensed Software so that the Licensed Software can avoid the infringement of such third party’s right.
5.4 If and when Yokogawa fails to take either of the countermeasures as set forth in the preceding subparagraphs of Paragraph 5.3, Yokogawa shall indemnify the Licensee only by paying back the price amount of the Licensed Software which Yokogawa has received from the Licensee.
THE FOREGOING PARAGRAPHS STATE THE ENTIRE LIABILITY OF YOKOGAWA AND ANY THIRD PARTY LICENSING THIRD PARTY SOFTWARE TO YOKOGAWA WITH RESPECT TO INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS INCLUDING BUT NOT LIMITED TO, PATENT AND COPYRIGHT.

Article 6 (Liabilities)

6.1 If and when the Licensee should incur any damage relating to or arising out of the Licensed Software or service that Yokogawa has provided to the Licensee under the conditions herein due to a reason attributable to Yokogawa, Yokogawa shall take actions in accordance with this Agreement. However, in no event shall Yokogawa be liable or responsible for any special, incidental, consequential and/or indirect damage, whether in contract, warranty, tort, negligence, strict liability, or otherwise, including, without limitation, loss of operational profit or revenue, loss of use of the Licensed Software, or any associated products or equipment, cost of capital, loss or cost of interruption of the Licensee’s business, substitute equipment, facilities or services, downtime costs, delays, and loss of business information, or claims of customers of Licensee or other third parties for such or other damages. Even if Yokogawa is liable or responsible for the damages attributable to Yokogawa and to the extent of this Article 6, Yokogawa’s liability for the Licensee’s damage shall not exceed the price amount of the Licensed Software or service fee which Yokogawa has received. The Licensee agrees that Yokogawa shall be released or discharged from part or all of the liability under this Agreement if the Licensee modifies, remodels, combines with other software or products, or causes any deviation from the basic specifications or functional specifications, without Yokogawa’s prior written consent.
6.2 All causes of action against Yokogawa arising out of or relating to this Agreement or the performance or breach hereof shall expire unless Yokogawa is notified of the claim within one (1) year of its occurrence.
6.3 In no event, regardless of cause, shall Yokogawa assume responsibility for or be liable for penalties or penalty clauses in any contracts between the Licensee and its customers.

Article 7 (Limit of Export)

Unless otherwise agreed by Yokogawa, the Licensee shall not directly or indirectly export or transfer the Licensed Software to any countries other than those where Yokogawa permits export in advance.

Article 8 (Term)

This Agreement shall become effective on the date when the Licensee receives the Licensed Software and continues in effect unless or until terminated as provided herein, or the Licensee ceases using the Licensed Software by itself or with Yokogawa’s thirty (30) days prior written notice to the Licensee. When aforesaid termination or cease is occurred, the Licensee shall immediately destroy and/or eliminate the Licensed Software and related documents without retaining any copies or extracts thereof. However, upon specifically instructed by Yokogawa, they shall be returned to Yokogawa or its designated third party.

Article 9 (Injunction for Use)

During the term of this Agreement, Yokogawa may, at its own discretion, demand injunction against the Licensee in case that Yokogawa deems that the Licensed Software is used improperly or under severer environments other than those where Yokogawa has first approved, or any other condition which Yokogawa may not permit.

Article 10 (Termination)

Yokogawa, at its sole discretion, may terminate this Agreement without any notice or reminder to the Licensee if the Licensee violates or fails to perform this Agreement. However, Articles 5, 6, and 11 shall survive even after the termination.

Article 11 (Jurisdiction)

Any dispute, controversies, or differences between the parties hereto as to interpretation or execution of this Agreement shall be resolved amicably through negotiation between the parties upon the basis of mutual trust. Should the parties fail to agree within ninety (90) days after notice from one of the parties to the other, both parties hereby irrevocably submit to the exclusive jurisdiction of the Tokyo District Court (main office) in Japan for settlement of the dispute to the fullest extent allowed by applicable law.

Article 12 (Governing Law)

This Agreement shall be governed by and construed in accordance with the laws of Japan. The Licensee expressly agrees to waive absolutely and irrevocably and to the fullest extent permissible under applicable law any rights against the laws of Japan which may have pursuant to the Licensee’s local law.

Article 13 (Severability)

In the event that any provision hereof is declared or found to be illegal by any court or tribunal of competent jurisdiction, such provision shall be null and void with respect to the jurisdiction of that court or tribunal and all the remaining provisions hereof shall remain in full force and effect.

How to Use This Manual

Structure of the Manual

This manual consists of the following five chapters and index.

Chapter	Title	Content
1	Before Using the DAQStudio	Explanation of the function outline for DAQStudio. Sample images of screens which actually produced are shown.
2	Creating a Monitor Screen with DAQStudio	Explanation of the operation method for creation of an original monitor screen. Explanation of the operation methods for efficient creation and the methods for saving and opening created display data.
3	Detailed Information for Attributes of Screens and Components	Detailed explanation of the individual attributes of screens and parts.
4	Communication with the GX/GP/DX Recorder	Explanation of the methods for receiving custom display screen data from the recorder and for sending display data which have produced/edited by DAQStudio to the recorder via Ethernet.
5	Messages, Handling Methods, and Version Information	Message list and explanation of the confirmation method for the DAQStudio version. Also explains the correspondence between the recorders that can be connected and the screen version of this software.
Index		Gives a list of important terms used in this manual.

Scope of the Manual

This manual does not explain the basic operations of your PC's operating system (OS). For information regarding the basic operations of Windows, see the user's guide that came with Windows.

Conventions Used in This Manual

Unit

K Denotes 1024 Example: 100 KB
M Denotes 1024K Example: 10 MB
G Denotes 1024M Example: 2 GB

Bolded Items

Items set in boldface mainly refer to on-screen interface elements such as menus, commands, dialog boxes, attributes, buttons, or keys on the keyboard.

Markings

► This mark is used to indicate a reference to a related procedure or explanation.
Example : ►Section 4.1

Symbols used in operational explanation

In the pages explaining operation (chapter 1 to 4), the following symbols are used to distinguish the descriptions.

Procedure This subsection contains the operating procedure used to carry out the function described in the current section. All procedures are written with inexperienced users in mind; experienced users may not need to carry out all the steps.

Explanation Explanation gives information such as limitations related the procedure.

Note Calls attention to information that is important for proper operation of the instrument.

Manual Revision History

Document name: DXA170 DAQStudio User's Manual
Document number: IM 04L41B01-62EN

Edition	Revised	Description of Revisions and DAQStudio Software Version
1st	January, 2009	New, R1.01
2nd	April 4, 2009	Corrections, new software display languages added (Chinese, German, French, Russian, Korean), R1.02
3rd	March, 2010	Added components, changed screens, and added/changed component attributes to support DXAvanced R4, R2.01.01 Components added: Group name, System icon, Memory bar, Time label, Batch group number, Batch name, and Modbus In. Component attribute name change: Batch number --> Batch group number
4th	August, 2010	Added component attributes to support DXAvanced firmware version 4.11, R3.01.01 Component attribute added: Batch name components, Communication input components, Modbus in components
5th	May 2014	Changed to support SMARTDAC+ GX/GP R2 R4.01.01

Contents

Terms and Conditions of the Software License ii
How to Use This Manual iv
Manual Revision History v

Chapter 1 Before Using the DAQStudio

1.1 Overview 1-1
Creating and Saving Screens 1-2
Monitor Screen Creation Flow 1-3
1.2 PC System Requirements 1-4
PC System 1-4

Chapter 2 Creating a Monitor Screen with DAQStudio

2.1 Starting/Exiting DAQStudio 2-1
Starting DAQStudio 2-1
Exiting DAQStudio 2-2
2.2 Explanation of the Main Screen of DAQStudio 2-3
2.3 Explanation of Menus, Icons, and Shortcut Keys 2-10
2.4 Creating New Screens, Setting the Grid Interval, and Switching the Screen Version 2-12
Specifying the type, recorder release number, and batch (DX only) 2-12
Setting the grid (setting the component movement interval) 2-13
Switching the screen version 2-14
2.5 Opening and Saving Files and Exporting and Importing Files 2-16
Open a file 2-16
Save a file 2-17
Exporting a File (GX/GP only) 2-18
Importing a File (GX/GP only) 2-18
2.6 Adding a Display 2-19
2.7 Creating Components 2-20
Notes on Creating Components 2-21
Explanation of the Components 2-22
2.8 Components Explanation and Creation Examples 2-24
Diagram Components 2-24
Components for Channel Assignment 2-24
Status display components (can be set on recorders other than DXAdvanced R3) 2-28
Label components 2-29
Components with action functions 2-30
Components for comment display 2-32
Components for summary display and list display 2-33
Components for trend display 2-34
Scale display components (DX only) 2-35
Components for static image display 2-36
2.9 Assigning Channels, Alarms, Groups, Batch Groups, and Bitmaps to Components 2-37
Assigning a channel to a component 2-37
Assigning an alarm to a component 2-37
Assigning group numbers to components 2-38
Assigning batch numbers to components (DX only) 2-38
Assigning images (PNG/BMP) to components 2-39
2.10 Editing Components and the Screen 2-40
Selection and deselection of components, movement, magnification/contraction 2-40
Copy/Cut/Paste/Delete/Add for components and screens 2-43

Undo/Redo of a screen or component editing operation 2-45
2.11 Arranging Components 2-46
2.12 Setting Attributes 2-53
Setting screen attributes 2-53
Setting component attributes 2-54

Chapter 3 Detailed Information for Attributes of Screens and Components

3.1 Screen Attributes 3-1
3.2 Component ID No. and Number of Components which can be Created on one screen 3-3
3.3 Common Attributes of Components 3-5
Explanation of choices and set values 3-5
Explanation of common attributes 3-5
Action settings (GX/GP)or Synchronize action (DX) 3-8
3.4 Attributes of Simple Digital Components 3-10
3.5 Attributes of Digital Components 3-12
3.6 Attributes of Simple Bar Graph Components 3-14
3.7 Attributes of Bar Graph Components 3-17
3.8 Attributes of Tag No. Components 3-20
3.9 Attributes of Tag String/Tag Comment Components 3-22
3.10 Attributes of Unit Components 3-24
3.11 Attributes of Span/Span Upper Limit/Span Lower Limit Components 3-26
3.12 Attributes of Alarm Indicator Components 3-28
3.13 System Icon Component Attribute 3-31
3.14 Attribute of Memory Bar Components 3-33
3.15 Attributes of DateTime Component / Time Label Component 3-36
3.16 Attributes of Batch Group Number Components 3-39
3.17 Attributes of Batch Name Components 3-41
3.18 Attributes of Group Name Components 3-44
3.19 Attributes of Label Components 3-47
3.20 Attributes of Button Operation Components/Push Button Components 3-49
3.21 Attributes of DOIntSwitch Components / Switch Components 3-53
3.22 Attributes of Communication Input Components 3-56
3.23 Attributes of Digital Operation Components / Modbus In Components 3-58
3.24 Attributes of Comment Box Components 3-61
3.25 Attributes of Comment Block Components 3-63
3.26 Attributes of Alarm Summary Components / Alarm List Components 3-65
3.27 Attributes of Message Summary Components / Message List Components 3-68
3.28 Attributes of Trend Components 3-71
3.29 Attributes of Scale Components 3-76
3.30 Attributes of Line Components 3-79
3.31 Attributes of Rectangle Components 3-81
3.32 Attributes of Circle Components 3-83
3.33 Attributes of Image Components/Bitmap Components 3-85

Chapter 4 Communication with GX/GP/DX Recorder

4.1 Receiving Display Data from GX/GP/DX Recorder 4-1
Notes on Firewalls 4-3
4.2 Sending Display Data to GX/GP/DX Recorder 4-4

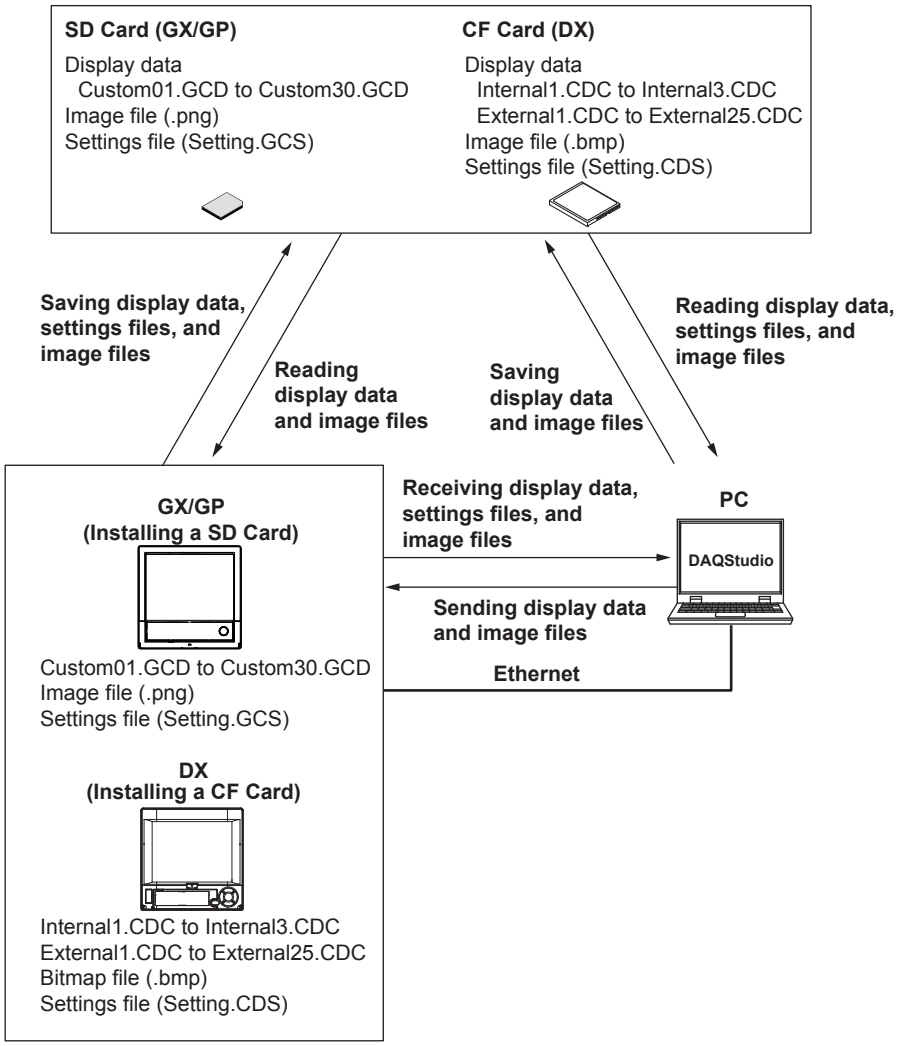
Chapter 5 Messages and Handling Methods

5.1 List of Messages 5-1
5.2 Version Information 5-4
5.3 Changing the Screen Version 5-5

Index

1.1 Overview

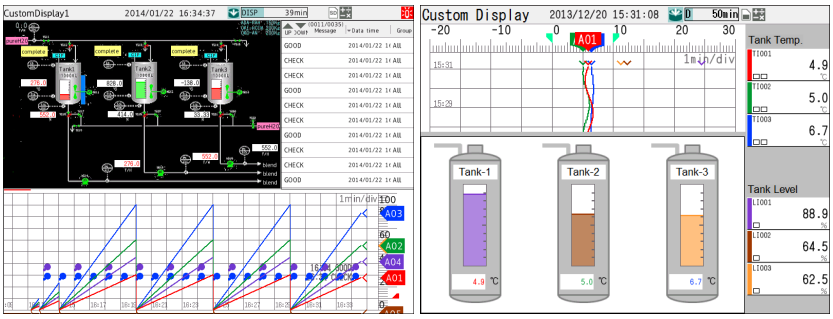
DAQStudio is a software application used to create original monitor screens for displaying data measured on GX10/GX20/GP10/GP20 paperless recorders (hereafter called the GX/GP) and DX1000/DX1000N/DX1000T/DX2000/DX2000T paperless recorders (hereafter called the DX). For monitoring of measuring data, it is possible to assign channels to digital parts, trend parts, etc., and diagram components can be used to create monitor screens matched to site images.
The monitor screens that you create can be displayed using the custom display function of the GX/GP/DX.
You can also use DAQStudio to receive custom display data from a GX/GP/DX and edit it and send the display data created with DAQStudio to a GX/GP/DX. Data can be exchanged via Ethernet or external storage media (SD memory card or CF card).



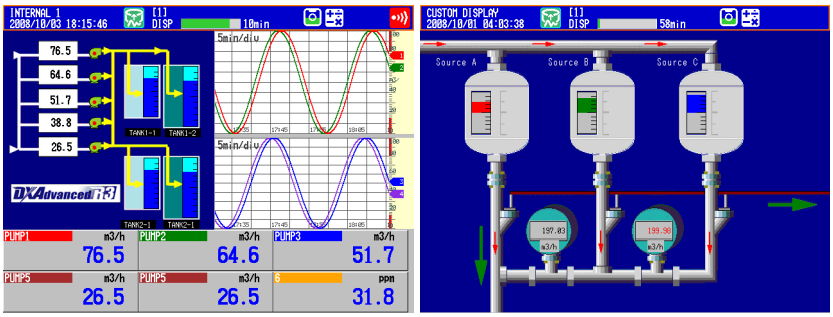
Settings files contain GX/GP/DX recorder settings that have been converted to data. When receiving screen data from the GX/GP/DX recorder, screen data and image files are received together. By receiving settings files, the GX/GP/DX recorder's setups can be reproduced on DAQStudio.

Monitor Screen Creation Examples

GX/GP



DX



A screen is composed of multiple parts, and background setting and display of static images also can be done.
Multiple parts can be related to each other, and parts can be combined with other parts.
Measuring channels are allotted to parts. Size, character font, color, unit, group control, and other attributes are set for each created part.
Parts can be laid out freely in the screen display area at screen grid intervals.

Note

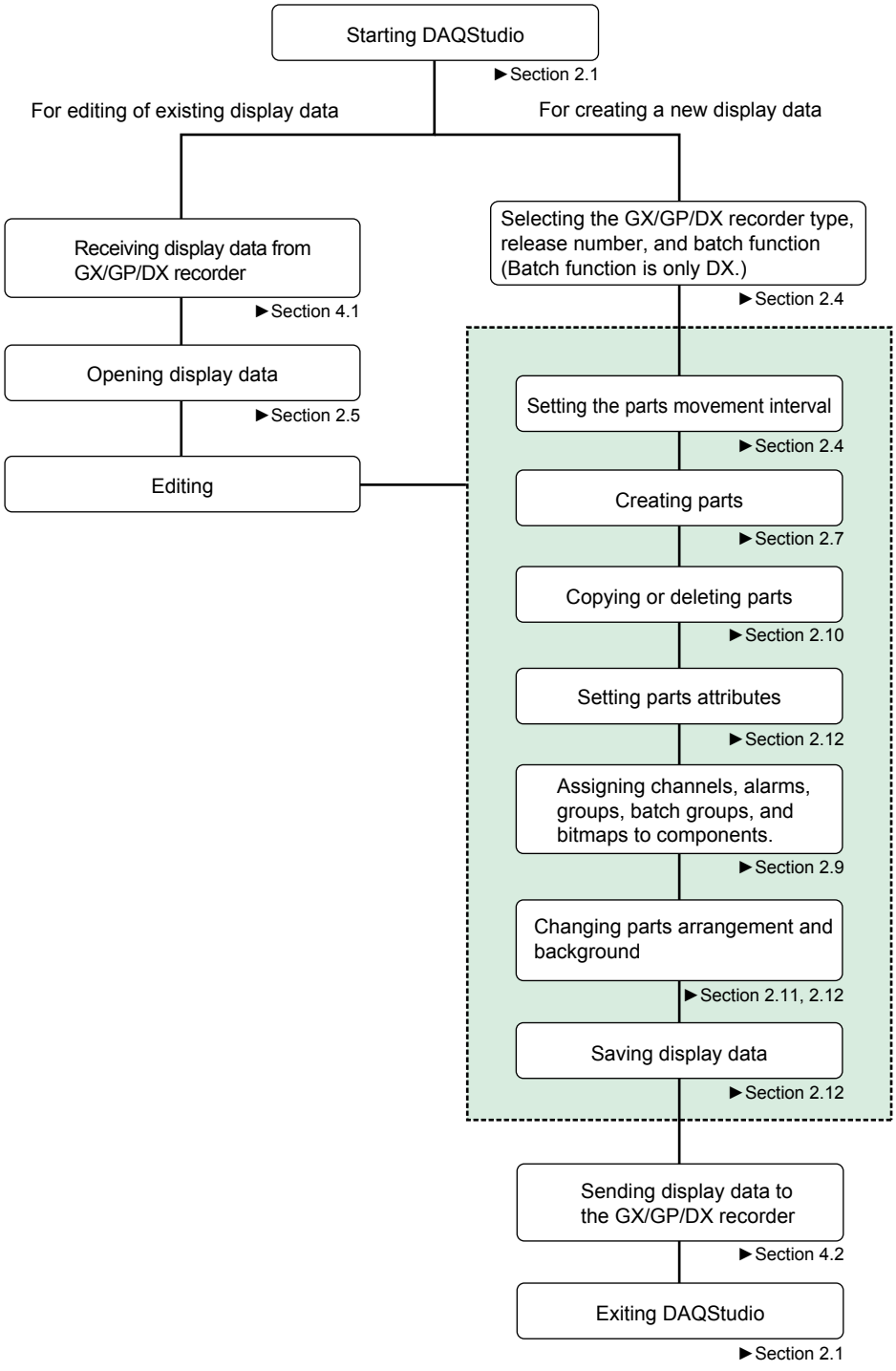
- Monitor screens are displayed correctly only when the language kind of the GX/GP/DX recorder and the language kind of DAQStudio are the same.
- As screens being created with DAQStudio cannot display measuring values, the display differs from the custom display execution screen of the GX/GP/DX recorder.
- DAQStudio cannot open a connection with the GX/GP/DX recorder if the GX/GP/DX is already communicating with another software program.

Creating and Saving Screens

An original monitor screen can be created newly or it can be created by receiving display data from the GX/GP/DX recorder and editing them with DAQStudio. The display data from the GX/GP/DX recorder can be retrieved via Ethernet or display data of the GX/GP/DX recorder saved to external storage media (CF card) can be read in.
Edited or created display data are stored on the hard disk of the computer or external storage media (CF card) and are sent to the GX/GP/DX recorder.

Monitor Screen Creation Flow

The monitor screen creation flow is shown below.



1.2 PC System Requirements

PC System

- **Supported Operating Systems (OS)**
  Run DAQStudio under any of the following operating systems.
  - Windows Vista Home Premium SP2 (excluding the 64-bit edition)
  - Windows Vista Business SP2 (excluding the 64-bit edition)
  - Windows 7 Home Premium SP1 (32-bit and 64-bit editions)
  - Windows 7 Professional SP1 (32-bit and 64-bit editions)
  - Windows 8 (32-bit and 64-bit editions)
  - Windows 8.1 (32-bit and 64-bit editions)
  - Windows 8 Pro (32-bit and 64-bit editions)
  - Windows 8.1 Pro (32-bit and 64-bit editions)

  The language displayed by the software under different language versions of the OS are as follows.

OS Language	Software Language
Japanese	Japanese
English	English
Chinese	Chinese
German	German
French	French
Russian	Russian
Korean	Korean

- **PC**
  Machine type
  A PC that runs one of the OS above, and that meets the following CPU and memory requirements.
  CPU and main memory capacity
  Intel Pentium 4, 3 GHz or faster x64 or x86 processor
  2 GB or more of memory

- **Hard disk**
  Free disk space: 100 MB or more

- **CD-ROM Drive**
  CD-ROM drive compatible with the OS. Used for installation.

- **Mouse**
  Mouse supported by the OS

- **Monitor**
  A video card that is recommended for the OS and a display that is supported by the OS, has a resolution of 1024×768 or higher, and that can show 65,536 colors (16-bit, high color) or more.

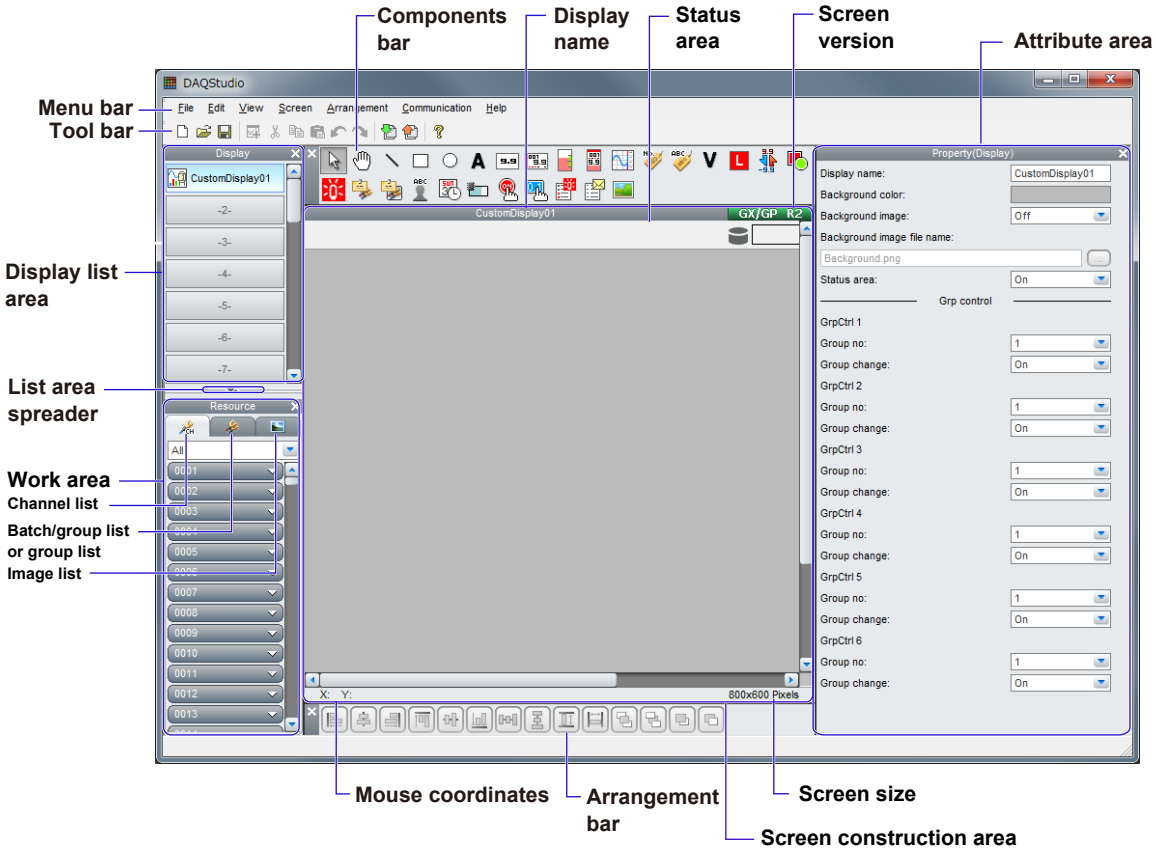
- **Communication Port**
  Ethernet port (10Base-T) supported by the OS. Also, TCP/IP protocol is required to be installed.

2.1 Starting/Exiting DAQStudio

Starting DAQStudio

Procedure

From the Start menu select **All Programs > DAQStudio > DAQStudio**.
The main screen of DAQStudio appears.



Explanation

The Main screen is composed of Menu bar, Tool bar, Display list area, Channel/Alarm list area, Components bar, Attribute area, Arrangement bar, and Screen construction area.
The main screen size is fixed. The GX20 screen is displayed by default.
Refer to Section 2.2 for details of each component in the Main screen. ►Section 2.2

The following settings are active upon startup.

- Batch function is OFF
- Channel/Alarm list page displayed
- The screen version is shown as “GX/GP R2” (recorder release number: GX20/GP20 R2).

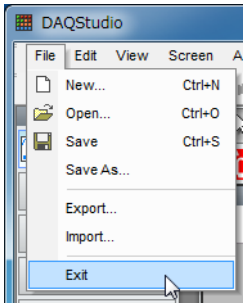
For the display when receiving screen data from the GX/GP/DX recorder ►Section 4.1

When creating a new screen, you can set the GX/GP/DX recorder release number and batch (DX only). ►Section 2.4

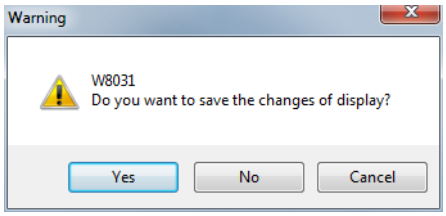
Exiting DAQStudio

Procedure

1. Select **File > Exit** from the menu bar or click the "×" mark at the right top of the Main screen.



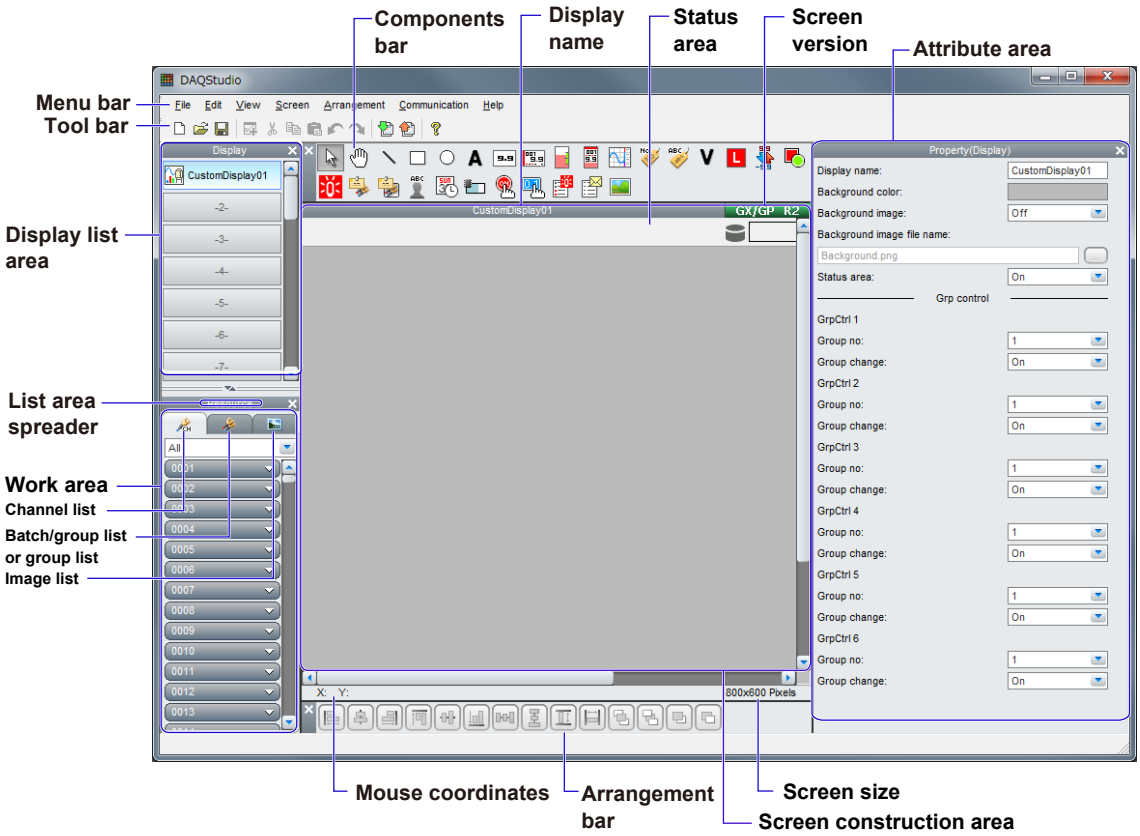
2. Exit from DAQStudio is made when there is no screen being edited.
   If there is a screen being edited, a dialog message confirming whether the screen is to be saved or not is displayed.



3. Click **[Yes]** or **[No]**. (Exit operation is cancelled when **[Cancel]** is clicked.)

2.2 Explanation of the Main Screen of DAQStudio

The configuration of the Main screen of DAQStudio is shown below.

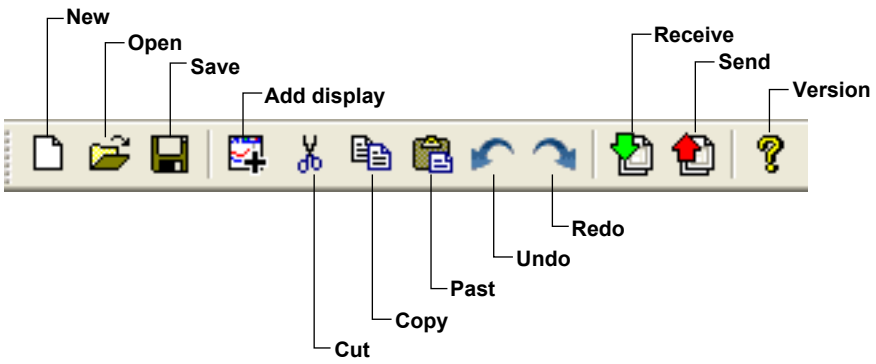


The icon names of each bar are shown below. Refer to Section 2.3 for the icon functions and the shortcut keys.

Menu bar

This is composed of **File**, **Edit**, **View**, **Screen**, **Communication**, and **Help**.

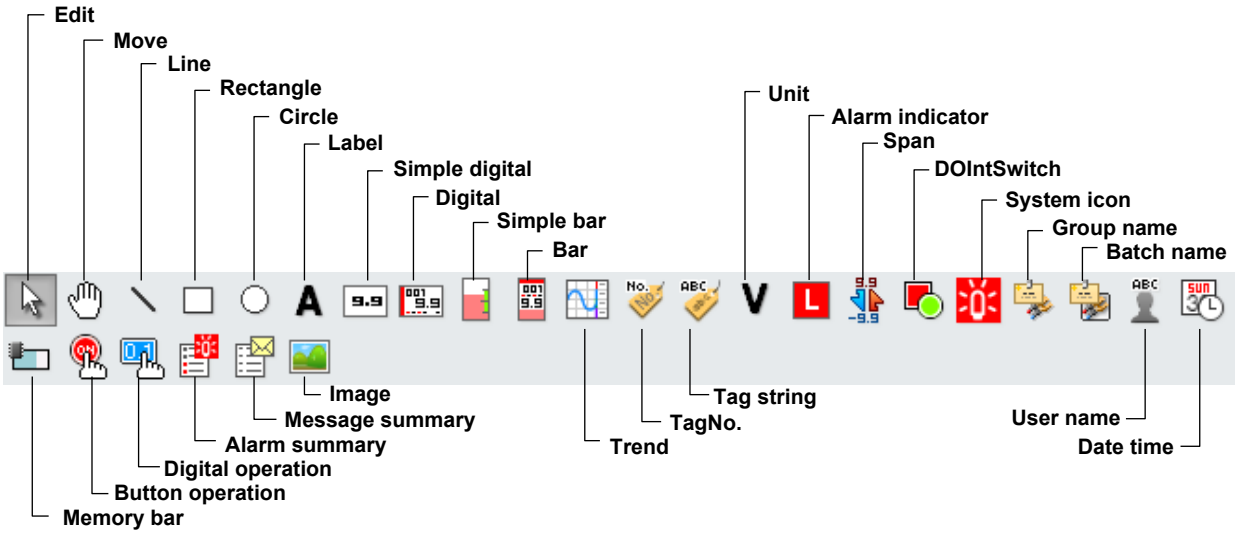
Tool bar



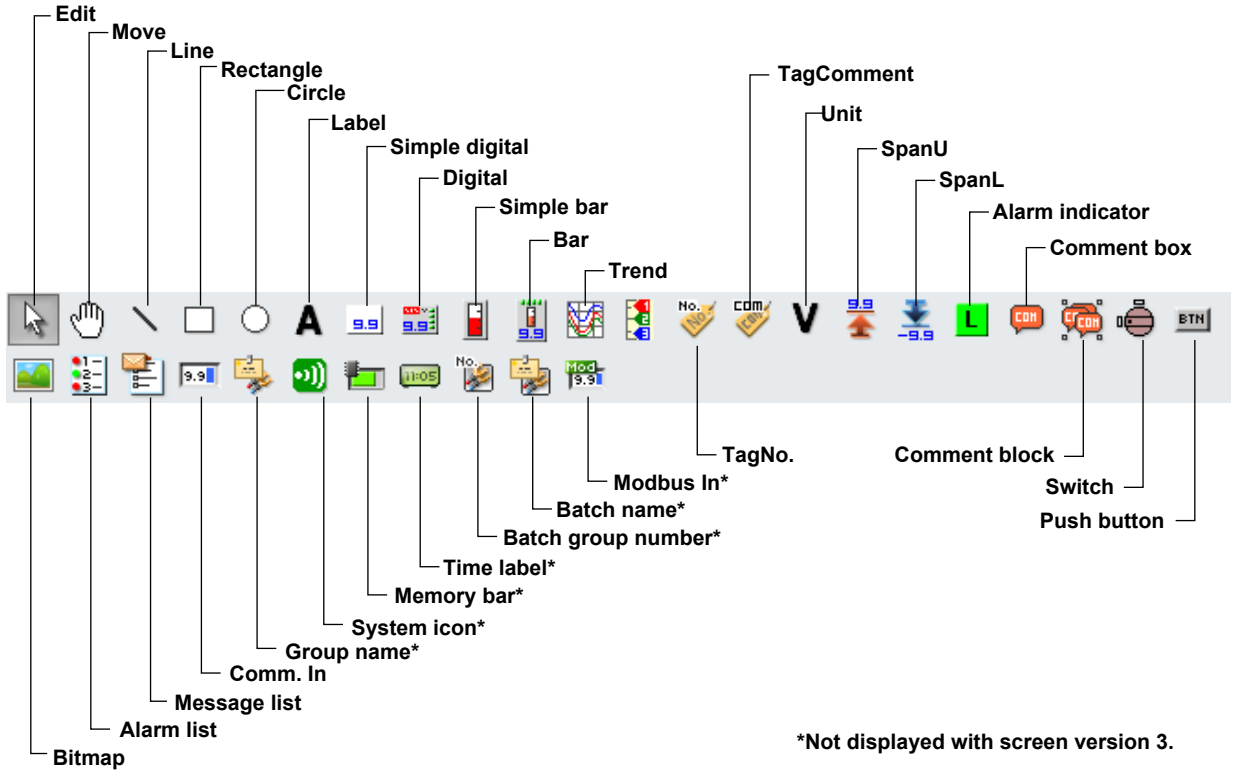
Component bar

The components that are available change when you switch the screen version.

GX/GP

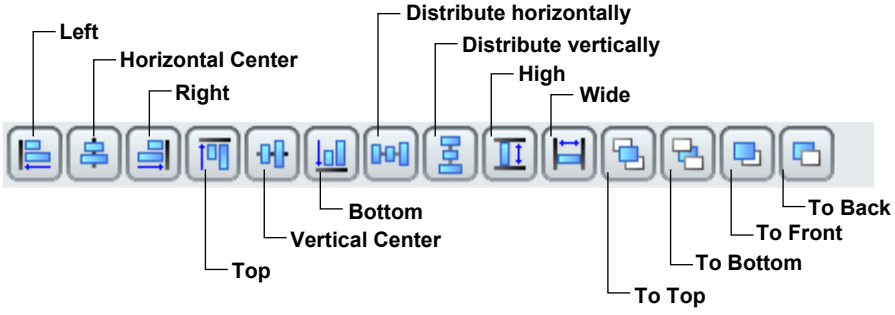


DX

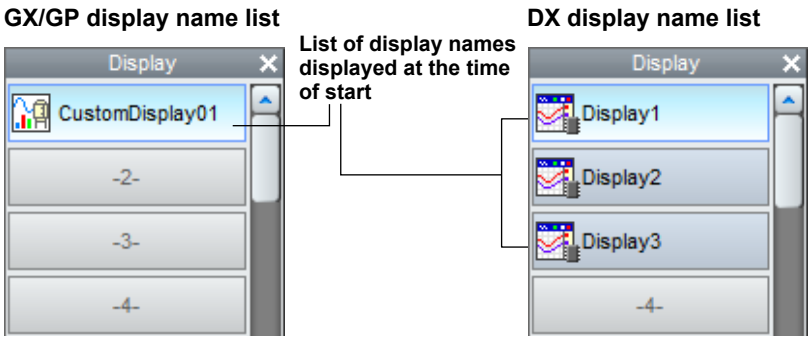


*Not displayed with screen version 3.

Arrangement bar



Display list area



Displays display names from No. 2 to No. 30
When a display name is clicked, the display of the Screen construction area changes.

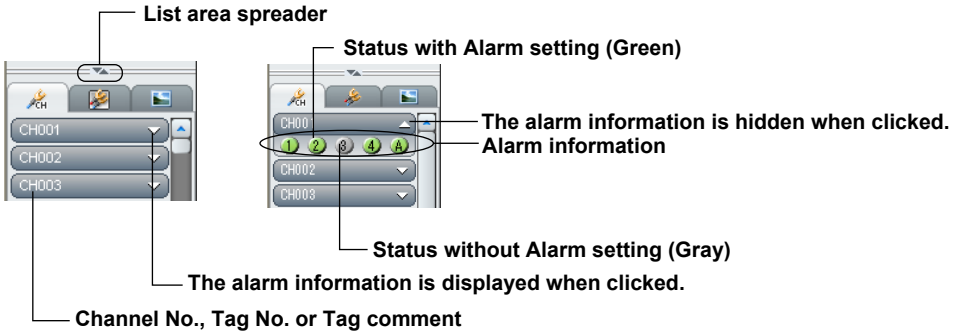
Displays display names from No. 4 to No. 28
When a display name is clicked, the display of the Screen construction area changes.

When a display name in the list is clicked or the up and down arrow keys (↑, ↓) of the keyboard are pressed to select a screen, the screen is displayed in the screen construction area.
When a display name is selected, display editing (Copy, Cut, Paste, Delete) can be done in the display list area.
When a location outside the Display list area is selected, editing of the Screen construction area becomes possible.
Refer to Section 2.10 for the operation procedure.
With the initial settings at startup, the GX/GP shows blank data for display name CustomDisplay01, and the DX shows blank data for display names Display1 to Display3.

Work area

The work area contains the tabs below. When screen data is received from the GX/GP/DX recorder, the lists that are displayed vary depending on the information in the settings file.

- **Channel/Alarm list**
  Channels or alarms can be assigned to components for channel assignment.



The Channel/Alarm information set at the GX/GP/DX recorder is displayed as Channel No., Tag No. or Tag Comment. At this time, the alarm information is included.
Switching of the display format can be selected from the View menu.
When the mouse pointer is placed onto the list area spreader, the mouse pointer changes to an arrow shape. By dragging, the View area can be increased or decreased vertically.
The initial settings for the Main screen when a new screen is created are shown on the next page.

For GX10/GP10:

I/O channel-unit0	[0001] to [0016], [0101] to [0116], [0201] to [0216]
I/O channel-unit1	[1001] to [1016], [1101] to [1116], [1201] to [1216], [1301] to [1316], [1401] to [1416], [1501] to [1516]
I/O channel-unit2	[2001] to [2016], [2101] to [2116], [2201] to [2216], [2301] to [2316], [2401] to [2416], [2501] to [2516]
I/O channel-unit3	[3001] to [3016], [3101] to [3116], [3201] to [3216], [3301] to [3316], [3401] to [3416], [3501] to [3516]
I/O channel-unit4	[4001] to [4016], [4101] to [4116], [4201] to [4216], [4301] to [4316], [4401] to [4416], [4501] to [4516]
I/O channel-unit5	[5001] to [5016], [5101] to [5116], [5201] to [5216], [5301] to [5316], [5401] to [5416], [5501] to [5516]
I/O channel-unit6	[6001] to [6016], [6101] to [6116], [6201] to [6216], [6301] to [6316], [6401] to [6416], [6501] to [6516]
Math channel	[A001] to [A050]
Comm channel	[C001] to [C050]

For GX20/GP20:

I/O channel-unit0	[0001] to [0016], [0101] to [0116], [0201] to [0216]
I/O channel-unit1	[1001] to [1016], [1101] to [1116], [1201] to [1216], [1301] to [1316], [1401] to [1416], [1501] to [1516]
I/O channel-unit2	[2001] to [2016], [2101] to [2116], [2201] to [2216], [2301] to [2316], [2401] to [2416], [2501] to [2516]
I/O channel-unit3	[3001] to [3016], [3101] to [3116], [3201] to [3216], [3301] to [3316], [3401] to [3416], [3501] to [3516]
I/O channel-unit4	[4001] to [4016], [4101] to [4116], [4201] to [4216], [4301] to [4316], [4401] to [4416], [4501] to [4516]
I/O channel-unit5	[5001] to [5016], [5101] to [5116], [5201] to [5216], [5301] to [5316], [5401] to [5416], [5501] to [5516]
I/O channel-unit6	[6001] to [6016], [6101] to [6116], [6201] to [6216], [6301] to [6316], [6401] to [6416], [6501] to [6516]
Math channel	[A001] to [A100]
Comm channel	[C001] to [C500]

For DX1000:

Meas channel	[CH001] to [CH012]
Math channel	[CH101] to [CH124]

For DX2000:

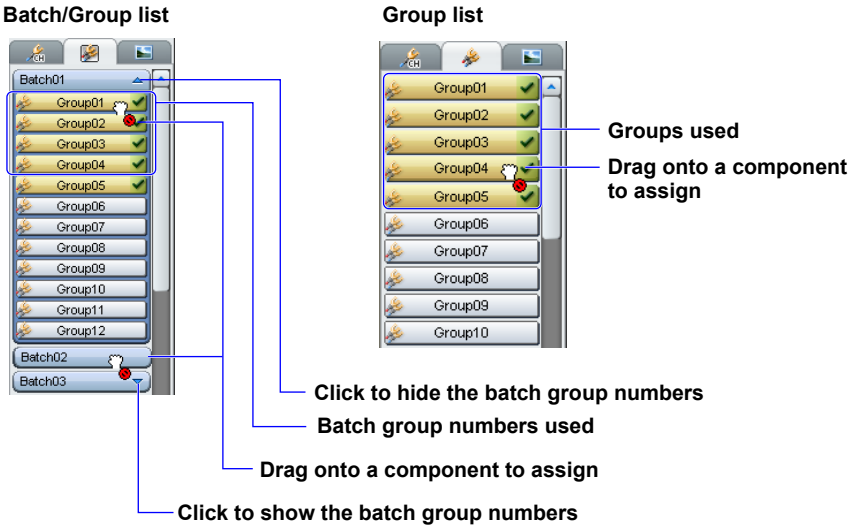
Meas channel	[CH001] to [CH048]
Math channel	[CH101] to [CH160]
Ext channel	[CH201] to [CH440]

Batch/Group list, or Group list

Shows the batches and groups, and enables assignment of batch or group to components. If MultiBatch is On on the DX recorder the Batch/Group list is displayed, and if Batch is turned Off or On, the Group list is displayed.

Components to which batch items can be assigned: Alarm list, Message list, Batch group number, Batch name, Memory bar

Components to which groups can be assigned: Trend, Scale, Group name



Batch and Group display range

Type	Batch	Group
DX1000	[Batch 01] to [Batch 06]	[Group 01] to [Group 06]
DX2000	DX2000 [Batch 01] to [Batch 12]	[Group 01] to [Group 12]

The maximum batch number is the number of multibatches recorded in the DX recorder settings file.

Group display range

Type	Group
GX10/GP10	[Group 01] to [Group 30]
GX20/GP20	[Group 01] to [Group 60]
DX1000	[Group 01] to [Group 10]
DX2000	[Group 01] to [Group 36]

- **Image list**

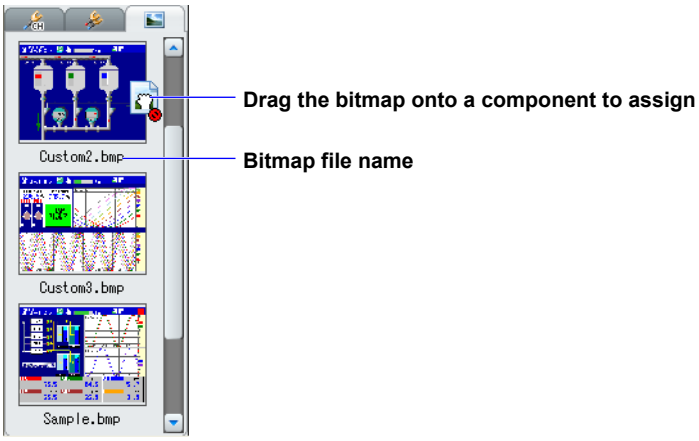
  Displays a list of data in the image folder. On the GX/GP, the data in this list can be assigned to the display background, waveform area background of image components and trend components, and scale images. On the DX, the data in this list can be assigned to bitmap components and scale components.

  Image folder: Bitmap files used by DAQStudio must be placed in a single location. This specific folder is called the bitmap folder.

  Components to which images can be assigned:

  GX/GP: Image, trend (waveform area background and scale image), and display background

  DX: Bitmap, scale



  Only the data that can be displayed by a GX/GP/DX recorder is shown in the image list. Only the images meeting the following criteria can be displayed by the GX/GP/DX recorder.

  GX/GP

  - File type: PNG files (*.png)
  - Image size: 800 x 600 pixels (WxH) or less (GX20/GP20)
    640 x 480 pixels (WxH) or less (GX10/GP10)
  - File name: Up to 64 characters including the extension
  - 24 bit RGB or 32 bit RGBA full color format

  DX

  - File type: Bitmap files (*.bmp)
  - Image size: 640 x 480 pixels (WxH) or less
  - 256 colors or less, uncompressed
  - File name: Up to 51 characters including the extension

  The list is sorted in order by the character code of the file name.

  Immediately after starting DAQStudio, creating a new screen, or receiving screen data from the GX/GP/DX recorder, the image folder is placed in the following location.

  [Drv]:\Users\[user name]\AppData\Roaming\DAQStudio.

  Where [Drv] is the drive on which the OS was installed.

  Where [user name] is the name of the user who is using the OS.

  Immediately after a file is saved, or immediately after a file is opened, the image folder becomes the target folder for saving screen construction files.

  Immediately after startup, or immediately after a new file is created, the image folder is cleared.

  Updating the image list

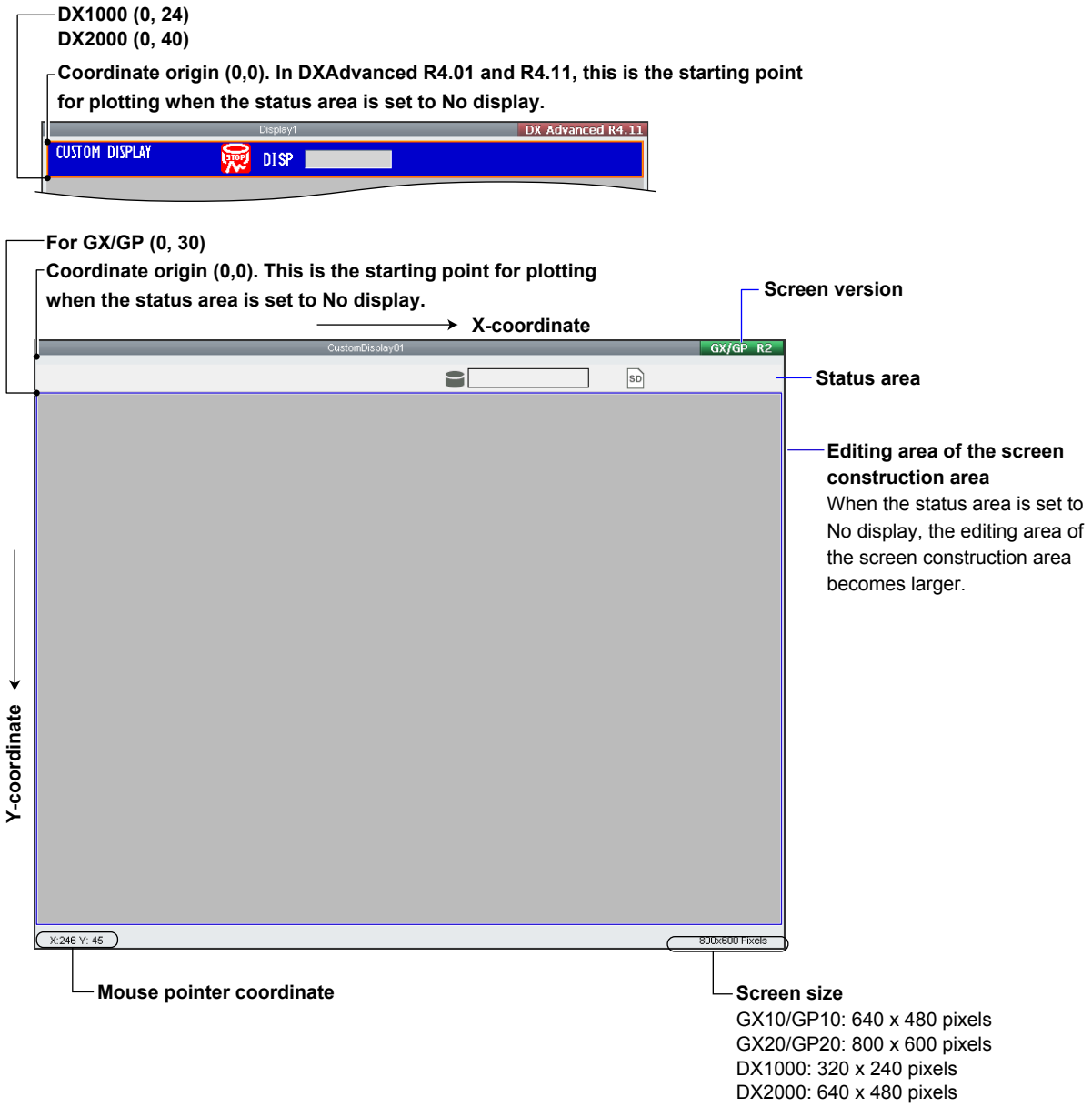
  The image list is updated immediately after startup, immediately after a new file is created, immediately after opening a file, immediately after saving a file, and immediately after receiving screen data from the GX/GP/DX recorder.

  Also, if you specify a folder and image in the attributes of image components and scale components, the specified data is copied to the image folder. Immediately thereafter, the image list is updated.

Screen Construction Area

The available screen versions are GX/GP R2, DX Advanced R3, DX Advanced 4.01, and DX Advanced R4.11.

On the GX/GP R2 screen, DX Advanced 4.01 screen, and DX Advanced R4.11 screen, hiding the status area expands the edit area of the screen construction area.


DX1000 (0, 24)
DX2000 (0, 40)
Coordinate origin (0,0). In DXAdvanced R4.01 and R4.11, this is the starting point for plotting when the status area is set to No display.
Display1
DX Advanced R4.11
CUSTOM DISPLAY
DISP
For GX/GP (0, 30)
Coordinate origin (0,0). This is the starting point for plotting when the status area is set to No display.
X-coordinate
Screen version
CustomDisplay01
GX/GP R2
SD
Status area
Editing area of the screen construction area
When the status area is set to No display, the editing area of the screen construction area becomes larger.
Y-coordinate
X:246 Y: 45
800x600 Pixels
Mouse pointer coordinate
Screen size
GX10/GP10: 640 x 480 pixels
GX20/GP20: 800 x 600 pixels
DX1000: 320 x 240 pixels
DX2000: 640 x 480 pixels

By default, the GX20/GP20 appears when you start the software.

2.3 Explanation of Menus, Icons, and Shortcut Keys

Menu bar contents, icons, and shortcut keys are shown in a list.
The icons are arranged on the Tool bar and on the Arrangement bar.

File menu

Menu name	Icon	Shortcut keys	Explanation
File	–	–	–
New		Ctrl+N	All present screens are discarded and a new screen is created.
Open		Ctrl+O	A screen construction file is loaded.
Save		Ctrl+S	A screen construction file is saved to the save folder by overwriting.
Save as	–	–	A save folder is specified and the screen construction file is saved to that folder.
Export	–	–	In the specified folder, a sub folder is created for each screen construction file, and the file is saved (GX/GP's external media format).
Import	–	–	A screen construction file saved in GX/GP's external media format is imported and displayed.
Exit	–	–	The application is exited.

Edit menu

Menu name	Icon	Shortcut keys	Explanation
Edit		–	–
Undo		Ctrl+Z	Undoes the previous edit operation.
Redo		Ctrl+Y	Redoes the undone edit operation.
Cut		Ctrl+X	The object is moved to the clipboard.
Copy		Ctrl+C	The object is copied to the clipboard.
Past		Ctrl+V	The object is copied from the clipboard and moved to the specified location.
Select All	–	Ctrl+A	All components in the Screen construction area are selected.
Delete	–	Delete	The object is deleted.
Add Display	–	–	A new screen is added to the display list

View menu

Menu name	Icon	Shortcut keys	Explanation
View	–	–	–
Channel	–	–	The Channel No. is displayed in the Channel list.
TagNo.	–	–	The Tag No. is displayed in the Channel list.
TagComment	–	–	The Tag Comment is displayed in the Channel list.
Grid	–	–	The Grid interval is displayed.
Display List	–	–	The display list is shown or hidden.
Operate Area	–	–	The operation area is shown or hidden.
Attribute Area	–	–	The attribute area is shown or hidden.
Part Bar	–	–	The parts list is shown or hidden.
Arrange Bar	–	–	The arrangement bar is shown or hidden.
Language	–	–	The display language is switched. The default setting depends on the OS language. English, Japanese, Chinese, French, German, Korean, Russian

View – Grid menu

Menu name	Icon	Shortcut keys	Explanation
1Dot	–	–	The screen grid interval is set to 1 dot.
5Dot	–	–	The screen grid interval is set to 5 dots.
10Dot	–	–	The screen grid interval is set to 10 dots.
20Dot	–	–	The screen grid interval is set to 20 dots.
50Dot	–	–	The screen grid interval is set to 50 dots.

Screen menu

Menu name	Icon	Shortcut keys	Explanation
Screen	–	–	–
DX Advanced 3(3)	–	–	Sets the screen to the DXAdvanced R3 version.
DX Advanced 4.01(0)	–	–	Sets the screen to the DXAdvanced 4.01 version.
DX Advanced 4.11(1)	–	–	Sets the screen to the DXAdvanced 4.11 version.
GX/GP R2(2)	–	–	Sets the screen to the GX/GP R2 version.

Arrangement menu

Menu name	Icon	Shortcut keys	Explanation
Arrangement	–	–	–
Left		–	The left edge of the selected component is arranged aligned with the left edge of the reference component.
Horizontal Center		–	The center in horizontal direction of the selected component is arranged aligned with the center in horizontal direction of the reference component.
Right		–	The right edge of the selected component is arranged aligned with the right edge of the reference component.
Top		–	The top edge of the selected component is arranged aligned with the top edge of the reference component.
Vertical Center		–	The center in vertical direction of the selected component is arranged aligned with the center in vertical direction of the reference component.
Bottom		–	The bottom edge of the selected components are aligned with the reference component.
Distribute horizontally		–	The selected components are distributed proportionally in the horizontal direction.
Distribute vertically		–	The selected components are distributed proportionally in the vertical direction.
Height		–	The height of the selected component is matched to the height of the reference component.
Width		–	The width of the selected component is matched to the width of the reference component.
To Top		–	The selected component is arranged for display on the foremost plane.
To Bottom		–	The selected component is arranged for display on the rearmost plane.
To Front		–	The selected component is arranged for display one plane to the front.
To Back		–	The selected component is arranged for display one plane to the rear.

Communication menu

Menu name	Icon	Shortcut keys	Explanation
Communication	–	–	–
Receive		–	A screen construction file is received from the GX/GP/DX recorder.
Send		–	A screen construction file is sent to the GX/GP/DX recorder.

Help menu

Menu name	Icon	Shortcut keys	Explanation
Help	–	–	–
User's manual (I)	–	F1	Displays the user's manual.
About		–	The About dialog is displayed.

2.4 Creating New Screens, Setting the Grid Interval, and Switching the Screen Version

When creating a new screen, you can set the GX/GP/DX recorder type, recorder release number, and batch (DX only), and set the grid interval. The GX/GP/DX recorder settings that can be entered when creating a new screen are limited to the type, GX/GP/DX recorder release number, and batch (DX only).
Because the GX/GP/DX recorder settings file is also received when receiving custom display screen data from the GX/GP/DX recorder, you can edit and create screens starting from the setting conditions of the GX/GP/DX recorder to which you connect.

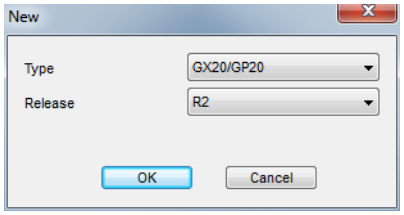
Specifying the type, recorder release number, and batch (DX only)

Specify the screen-data target type (GX10/GP10, GX20/GP20, DX1000, or DX2000), the GX/GP/DX recorder release number, and the batch on/off/MultiBatch setting (DX only).

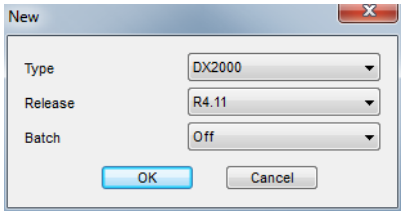
Procedure

1. Select **File > New** from the menu bar or click the New icon.
The **New** dialog box appears.
The initially set screen is [GX20/GP20] and [R2].

Display of GX20/GX20



Display of DX2000



2. Set the type and recorder release number, and then click [**OK**].
For the DX1000 or DX2000, specify the batch setting in addition to the type and recorder release number.
OK: The displayed display data are discarded and a new screen is created. The size of the screen construction area for the selected model is displayed.
Cancel: Return to the Main screen.

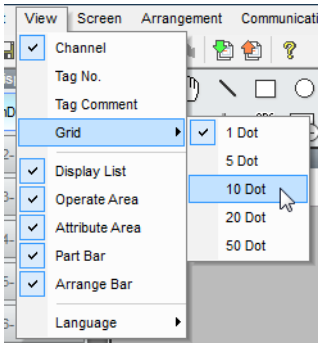
Explanation

When creating a new screen, specify the type, recorder release number, and batch.
The release number of the GX/GP/DX recorder you can connect to differs depending on the recorder release number (screen version) set here.
See “Switching the Screen Version” in this section. When creating a new screen, the Channel/Alarm list page appears in the work area. When creating a new screen, if MultiBatch is selected under Batch, the Batch/Group list page appears in the work area, and the Group list page is not displayed. When creating a new screen, if On or Off is selected under Batch, the Group list page appears in the work area, and the Batch/Group list page is not displayed.

Setting the grid (setting the component movement interval)

Procedure

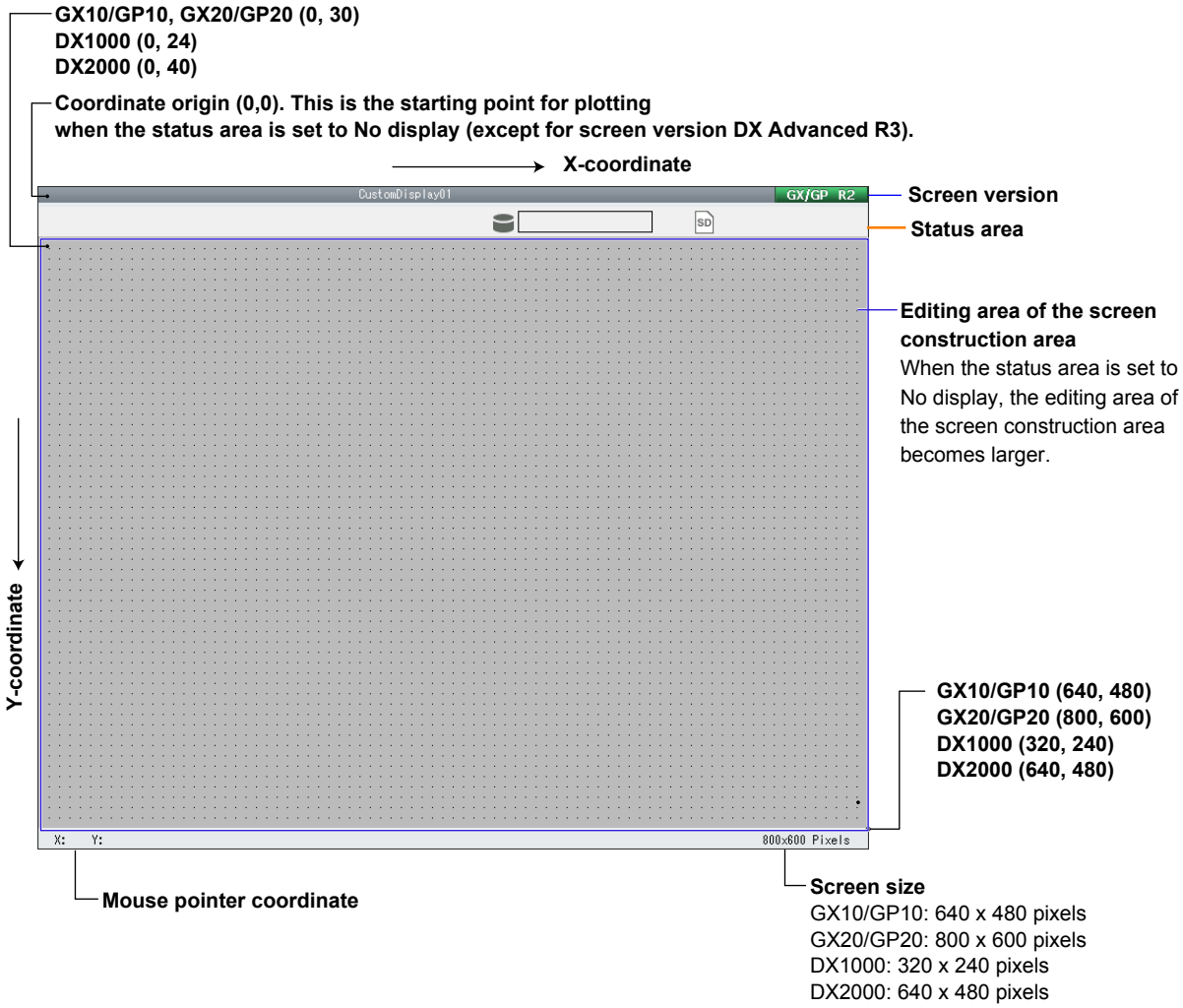
1. Select **View > Grid** from the menu bar.
2. Specify the screen grid.



Explanation

Components can be moved in grid intervals. When components are moved, they can be arranged in a condition with the left apex contacting the grid. The grid appears when it is set to a value other than 1 Dot (default value).

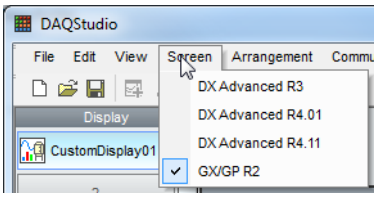
The screen construction area
The following figure is a GX20/GP20 screen with the grid set to 10 Dot.


GX10/GP10, GX20/GP20 (0, 30)
DX1000 (0, 24)
DX2000 (0, 40)
Coordinate origin (0,0). This is the starting point for plotting
when the status area is set to No display (except for screen version DX Advanced R3).
X-coordinate
CustomDisplay01
GX/GP R2
Screen version
Status area
Editing area of the screen construction area
When the status area is set to No display, the editing area of the screen construction area becomes larger.
Y-coordinate
GX10/GP10 (640, 480)
GX20/GP20 (800, 600)
DX1000 (320, 240)
DX2000 (640, 480)
X:
Y:
800x600 Pixels
Mouse pointer coordinate
Screen size
GX10/GP10: 640 x 480 pixels
GX20/GP20: 800 x 600 pixels
DX1000: 320 x 240 pixels
DX2000: 640 x 480 pixels

Switching the screen version

Procedure

1. On the Screen menu, click the appropriate screen version.
The screen version switches accordingly.



Explanation

The version of the GX/GP/DX recorder you can connect to differs depending on the DAQStudio screen version. See the table below.

Screen version and GX/GP/DX recorder release number

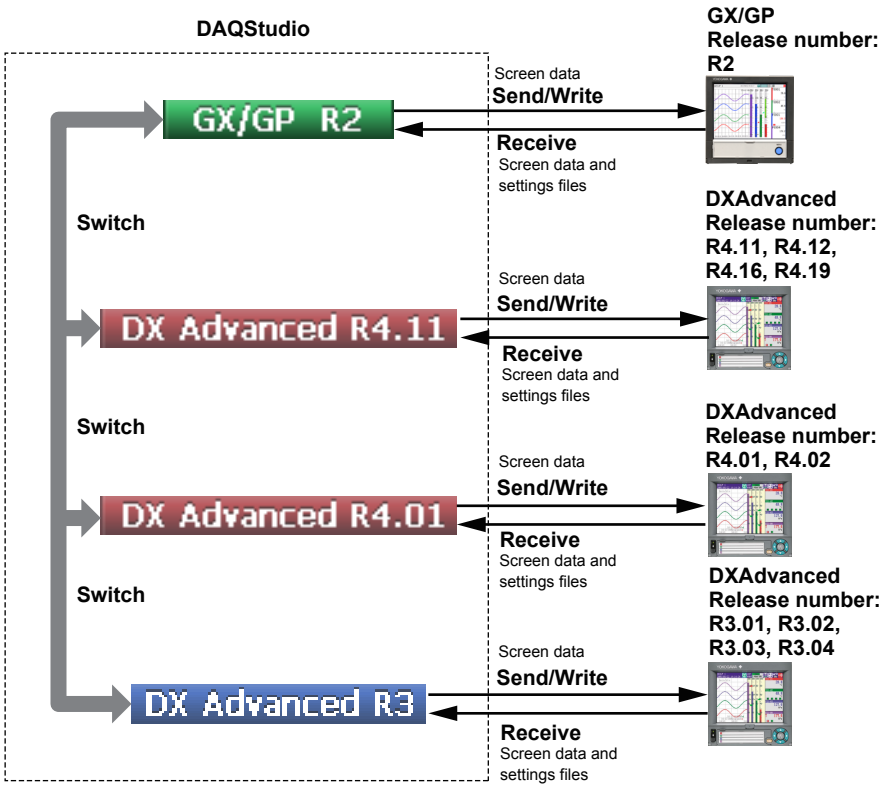
Screen version	Release number of compatible recorders
DX Advanced R3	R3.01, R3.02, R3.03, R3.04
DX Advanced R4.01	R4.01, R4.02
DX Advanced R4.11	R4.11, R4.12, R4.19
GX/GP R2	R2.01

Note that switching the screen version can cause component attribute settings to change or unsupported components to appear.
If you change the screen version and additional component attribute settings appear, they are set to their defaults.
►Section 5.3

Screen version and GX/GP/DX recorder version data compatibility

DAQStudio R3.01.01 is compatible with screen construction files from DX recorder versions 3.01, 3.02, 3.03, 3.04, 4.01, 4.02, 4.11, R4.16, and R4.19.

- Communication with a GX/GP recorder whose recorder release number is R2 and writing to screen construction files are available only when displaying GX/GP R2 screens.
- Communication with a DX recorder whose recorder release number is R3.01, R3.02, R3.03, or R3.04 is available only when displaying DX Advanced R3 screens.
- Writing to DX Advanced R3 screen construction files is available only when displaying DX Advanced R3 screens.
- Communication with a DX recorder whose recorder release number is R4.01 or R4.02 is available only when displaying DX Advanced R4.01 screens.
- Writing to DX Advanced R4.01 screen construction files is available only when displaying DX Advanced R4.01 screens.
- Communication with a DX recorder whose recorder release number is R4.11, R4.12, R4.16, or R4.19 is available only when displaying DX Advanced R4.11 screens.
- Writing to DX Advanced R4.11 screen construction files is available only when displaying DX Advanced R4.11 screens.



2.5 Opening and Saving Files and Exporting and Importing Files

Open a file

Procedure

1. Select **File > Open** from the menu bar or click the **Open** icon.
   The **Open** dialog box appears.
2. Specify the file location and the file name and click **[Open]**.
   When a screen being created is displayed, the following message appears.
3. Click **[OK]** if it is OK to discard the present screen.
   The screen construction data are displayed.

   Click **[Cancel]** if you do not want to discard the present screen.
   File opening is cancelled and return is made to the Main screen.

Explanation

For the GX/GP, the file names that the software can use are “Custom01.GCD” to “Custom30.GCD.” For the DX, they are “Internal1.cdc” to “Internal3.cdc” and “External1.cdc” to “External25.cdc.”
When a file is specified, all files with the above names are opened in the folder where that files is located.
When a file is opened, the display name of the opened file is displayed in the display list area. The display name can be changed on the attribute of the display (►Section 3.1).
When a display data is received from a GX/GP/DX recorder (►Section 4.2), the display name defined on the GX/GP/DX recorder is displayed in the display list area.

The save destination folder of the opened file becomes the save object folder. When a different file is opened, the save object folder becomes the folder of the opened file.

Save a file

Procedure

Saving a file by specifying a folder

1. Select **File > Save as** from the menu bar.
   The **Browse for Folder** dialog box appears.
2. Specify a folder or click the **[New folder]** button to create a folder.
   If the [New folder] button has been clicked, enter a name for the new folder.

Note

- Network folders or compressed folders cannot be specified at the time of saving a display data.
- Newly created display data must be saved. Save the image files (PNG or BMP) to be assigned to components in the same folder as the display data.
- The display data or bitmap file must be saved every time they have been received from GX/GP/DX recorder.

3. Click **[OK]**.
   The data are saved.

Saving a file by overwriting

Select **File > Save** from the menu bar or click the **Save** icon.
In an already existing folder, the data will be saved by overwriting. If a new folder is specified, the new folder becomes the target folder for saving files.

Explanation

When the file save folder is specified, the entire information of the Display list area is saved. The file name at the time of saving is as shown below.

GX/GP		DX	
Display names in the Display list area at the initial setting*	**The file name when the file was saved**	**Display names in the Display list area at the initial setting***	**The file name when the file was saved**
CustomDisplay01	Custom01.gcd	Display1	INTERNAL1.cdc
-2- (CustomDisplay02: when adding a new data, “Copy”+ display name: of the copy source)	Custom02.gcd	Display2	INTERNAL2.cdc
-3- (CustomDisplay03: when adding a new data, “Copy”+ display name: of the copy source)	Custom03.gcd	Display3	INTERNAL3.cdc
-4- (CustomDisplay02: when adding a new data, “Copy”+ display name: of the copy source)	Custom04.gcd	-4- (Display4: when adding a new data, “Copy”+ display name: of the copy source)	EXTERNAL1.cdc
-5- (CustomDisplay02: when adding a new data, “Copy”+ display name: of the copy source)	Custom05.gcd	-5- (Display5: when adding a new data, “Copy”+ display name: of the copy source)	EXTERNAL2.cdc
• • •	• • •	• • •	• • •
-29- (CustomDisplay29: when adding a new data, “Copy”+ display name: of the copy source)	Custom29.gcd	-27- (Display27: when adding a new data, “Copy”+ display name: of the copy source)	EXTERNAL24.cdc
-30- (CustomDisplay30: when adding a new data, “Copy”+ display name: of the copy source)	Custom30.gcd	-28- (Display28: when adding a new data, “Copy”+ display name: of the copy source)	EXTERNAL25.cdc

* The display name can be changed on the attribute of the display (►Section 3.1). Display data for item number 2 and later on the GX/GP or display data for item number 4 and later on the DX is saved to a file when a screen is added (► section 2.6) or copied from another screen (► section 2.10).

If the file name is changed to file name other than shown above, the display data cannot be sent to the GX/GP/DX recorder.

Exporting a File (GX/GP only)

Procedure

1. On the **File** menu, click **Export**.
   The **Browse for Folder** dialog box appears.

2. Specify a folder or click the **[New folder]** button to create a folder.
   If the [New folder] button has been clicked, enter a name for the new folder.

Note

Network folders or compressed folders cannot be specified when exporting a file.

3. Click **[OK]**.
   In the specified folder, a sub folder is created for each screen construction file, and the file is saved.

Explanation

For each piece of data in the image list area, a sub folder is created in the specified folder, and the data is saved.
The exported image data is saved in the specified folder as follows. Settings files are saved in the specified folder.

Display names in the Display list area at the initial setting*	Folder name	Saved file
CustomDisplay01	01	Custom01.gcd Image file**
-2- (CustomDisplay02: when adding a new data, “Copy”+ display name: of the copy source)	02	Custom02.gcd Image file**
-3- (CustomDisplay03: when adding a new data, “Copy”+ display name: of the copy source)	03	Custom03.gcd Image file**
• • •		• • •
-29- (CustomDisplay29: when adding a new data, “Copy”+ display name: of the copy source)	29	Custom29.gcd Image file**
-30- (CustomDisplay30: when adding a new data, “Copy”+ display name: of the copy source)	30	Custom30.gcd Image file**

* The display name can be changed on the attribute of the display (►Section 3.1). Display data for item number 2 and later (GX/GP) is saved to a file when a screen is added (► section 2.6) or copied from another screen (► section 2.10).

** The image file is saved only when it is in use.

Importing a File (GX/GP only)

Procedure

1. On the **File** menu, click **Import**.
   The **Browse for Folder** dialog box appears.

2. Specify the folder.

3. Click **[OK]**.
   The screen construction file in the specified folder is displayed.

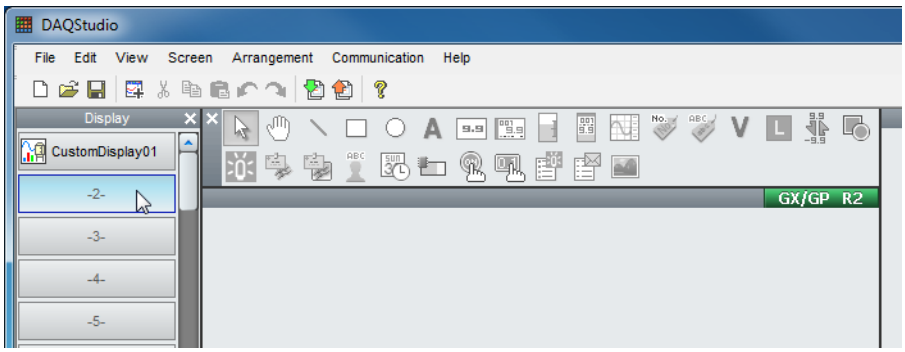
Explanation

The image list area displays the display name of the opened file. The display name can be changed on the attribute of the display (►Section 3.1).

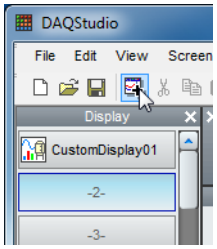
2.6 Adding a Display

Procedure

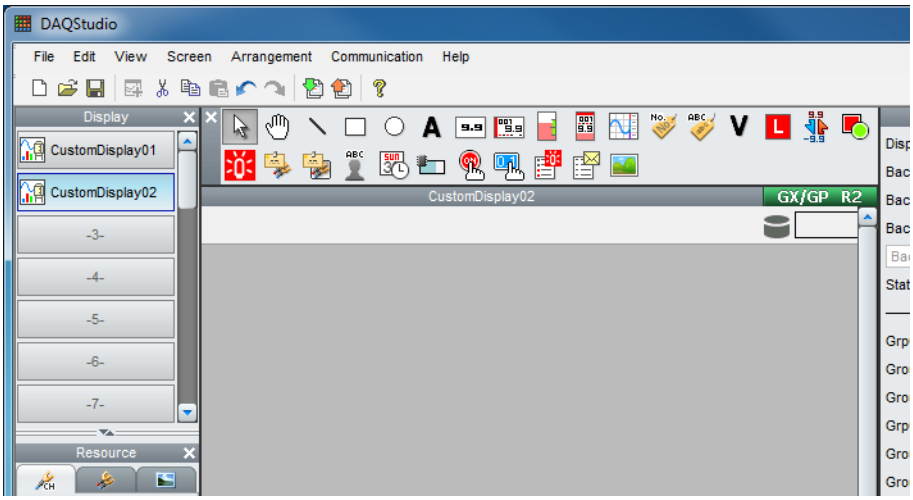
1. Click the Display name in the display list area.
   Now the Add Display icon of the Tool bar can be selected.



2. Select **Edit > Add Display** from the menu bar or click **Add Display** icon.



The screen construction area is displayed.



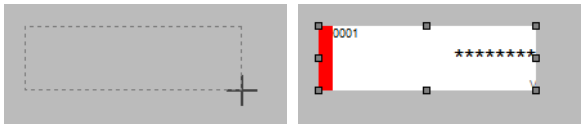
Note

The screens in the display list cannot be of different screen versions. If you switch the screen that you have added (or another screen on the display list) to an earlier version, all the screens on the display list will be switched to the earlier version. Any components that are not supported by the earlier screen version will be deleted.

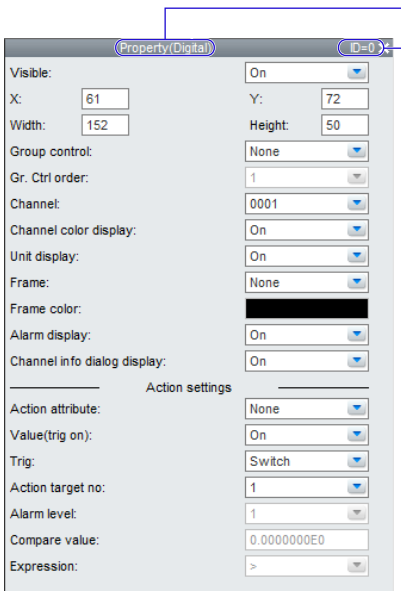
2.7 Creating Components

Procedure

1. On the Components bar, click the icon for the component to be created.
2. Place the mouse pointer in the screen construction area and drag it.
   A component with the dragged size is created.



3. Click the component.
   The attributes of the selected components are displayed in the Attribute area.



Component type

ID numbers are allotted in the order of creation.
The ID number differs depending on the kind of component.
(Refer to Section 3.2.)

4. Set each attribute item.
   For details, refer to Chapter 3.

Explanation

Notes on Creating Components

After creating components aligned to the grid, if placed adjacent to each other they overlap by 1 dot even though they do not appear to overlap. Separate components from each other by at least 1 dot.

Display on the GX/GP recorder when components overlap

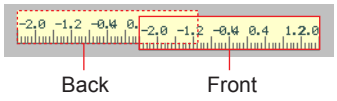
- If a component overlaps with a trend component, only the trend component is displayed, regardless of how they are stacked.
- If two trend components overlap, only the one on top is displayed.
- If two image components overlap, only the one on top is displayed.

Display on the DX recorder when components overlap on the execution screen

Limitations (A, B, and C) apply when components overlap on the execution screen. If components with the same overlap restriction are overlapping, components placed under the front component (i.e., in the background) are not displayed.

Overlap restriction	Component name (attribute conditions)
None	Digital, bar, scale (kind: OFF), label, tag No., tag comment, simple digital, simple bar graph, alarm mark, units, alarm indicator, span lower limit, span upper limit, line, rectangle, circle, push button, switch, comment box, comment block, Comm In, Group name, System icon, Memory bar, Time label, Batch group number, Batch name, Modbus In
A	Scale (kind: ON) Alarm list Message list
B	Scale (kind: bitmap), bitmap
C	Trend

For example, if two components with Overlap restriction A are overlapping on the builder screen, only the front component is displayed on the custom display execution screen of the DX recorder.



Explanation of the Components

The icons of the component bar are explained.

Component type	Component name	Icon		Explanation
		GX/GP	DX	
–	Edit			When the Edit icon is clicked, the components of the Screen construction area can be selected.
	Move			When a scroll bar is shown in the screen construction area, you can drag the screen construction area to move the edit area.
Diagram components	Line			Create a straight line connecting any two points.
	Rectangle			Create a rectangle with any dragged points at opposite corners.
	Circle			Create a circle in a square with any dragged points at opposite corners.
Components for channel assignment	Simple digital			Create simple digital components displaying digital values of specified channels.
	Digital			Create components displaying digital values with Tag Comment/Tag No./Channel No., Unit, and Alarm indicator.
	Simple bar			Create simple bar components displaying a bar of a specified channel.
	Bar			Create components with tag comment, tag/tag No./ channel No., unit, and digital value added to a simple bar.
	TagNo.			Create a component displaying the tag No. of a specified channel.
	Tag string			Create a component displaying the tag string of a specified channel.
	TagComment			Create a component displaying the tag comment of a specified channel.
	Unit			Create a component displaying the unit of a specified channel.
	Span value			Create a component displaying the upper and lower limit values for the span of a specified channel.
	SpanU			Create a component displaying the upper limit value for the span of a specified channel.
	SpanL			Create a component displaying the lower limit value for the span of a specified channel.
	Alarm indicator			Create a component displaying the alarm level of a specified level, a specified channel.
Status display component	Group name			Create a component displaying a group name.
	System icon			Create a component displaying a system icon. The kinds of system icon are: Memory sample, Alarm, CF card, Math, Key lock, Email, Status, Key lock & email, UserLock, and UserLock & status.
	Memory bar			Create a component displaying the progress of memory sampling.
	Date time			Create a component displaying the current date and time.
	Time label			
	Batch group number			Create a component displaying the MultiBatch batch group number.
	Batch name			Create a component displaying the batch name.
Label components	Label			Create a label displaying an arbitrary text string.

Continued on the next page

Component type	Component name	Icon		Explanation
		GX/GP	DX	
Components with action functions	DOIntSwitch			Create a component for displaying the state of a DO channel or internal switch and controlling the on/off state of the DO channel or internal switch through user interaction.
	Button operation			Create a component for executing an action specified by a function when the component is touched.
	Push button			Create a push button.
	Switch display			Create a switch component displaying the state of an internal switch and performing ON/OFF switching of the internal switch by operation.
	Digital operation			Create a component for displaying the value of specific communication input data or writing a value as communication input data.
	Comm In			Create a component displaying the value of specified communication input data and writing values as communication input data.
	Modbus In			Create a component that displays the input value of the communication channel set by the specified send command number, or that writes temperature controller and other SP values.
Components for comment display	Comment box			Create a component displaying a text string set at the DX recorder.
	Comment block			Create a component displaying a comment block text string set at the DX recorder
Components for summary display	Alarm summary			Create a component for display an alarm summary.
	Message summary			Create a component for display a message summary.
Components for list display	Alarm list			Create a component displaying an alarm list.
	Message list			Create a component displaying a message list.
Scale components	Scale			Create a scale component displaying a scale plate used together with trend display.
Components for trend display	Trend			Create a trend component displaying the trend of a specified group.
Components for static image display	Image			Create a component for displaying a PNG static image.
	Bitmap			Create a component displaying a static screen in bitmap format.

Component attributes

Refer to Chapter 3 for the creation number of components, the setting contents of attributes, and the initial values.

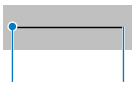
2.8 Components Explanation and Creation Examples

This section shows creation examples for components. Components created with DAQStudio and components of the custom display screen of the GX/GP/DX recorder differ in the display of measuring data, alarm display, etc. The components creation examples are a mix of components created with DAQStudio and those of the custom display execution screen of the DX recorder.

For components other than lines, the upper left apex of the component is the origin for positioning on the grid, and the lower right apex is positioned at (origin - 1 dot).
For components that enable text label entry, any characters entered exceeding the maximum allowed number are deleted.

Diagram Components

Line

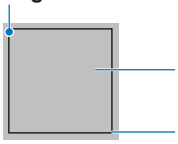


Origin **You can draw a line going in the left/right or up/down direction from an origin.**

If the start and end points overlap, 1 dot of space along the X axis is inserted. Start and end points are positioned on the grid.

Rectangle

Origin

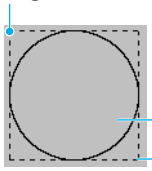


Background color

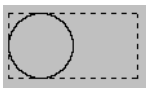
You can draw a rectangle from an origin toward the lower right.

Circle

Origin



A circle contacting a square from the inside is drawn.



Even when a rectangle is specified, a circle is drawn, but an ellipse cannot be drawn.

Background color

A circle is drawn by dragging from a point of origin.

Components for Channel Assignment

Restrictions on channel assignments

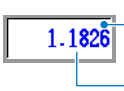
The measured value of the assigned channel is displayed in the GX/GP recorder operation screen or the DX recorder execution panel.
On a DX with the Math (/M1) and PROFIBUS-DP (/CP1) options, PROFIBUS-DP always uses the communication input channels in the table below. The channels in the table below cannot be assigned using DAQStudio.

Channels used with the /M1 and /CP1 option

Type	Communication input channels used
DX1000	C01 to C24 (all)
DX2000	C01 to C32

Simple digital

The digital value of the specified channel is displayed.

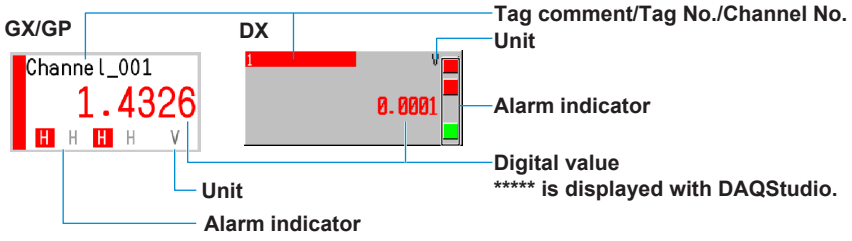


Simple digital display area (Frame: Sunken)

Digital value
******* is displayed with DAQStudio.**

Digital

Tag comment/tag No./channel No. of the measuring channel, unit, alarm indicator, and digital value are displayed.

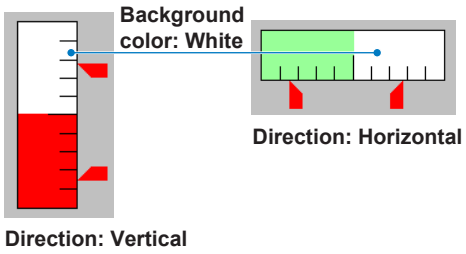


Note

- For the GX, the number of digits that appears in the text on a simple digital component and digital components varies depending on the channel type.
  I/O channel (not log): ********
  I/O channel (log, one decimal place): ********
  I/O channel (log, two decimal places): **********
  Math, communication channel: **********
- For the DX, tags (tag comments) may be displayed as blank (space), depending on the channel's font setting. Refer to Section 3.3 for the character types provided for each font (character size).

Simple bar graph

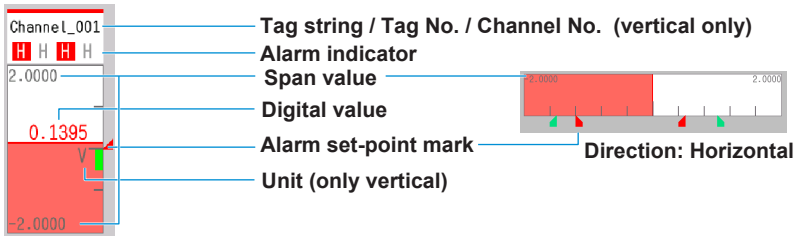
Bar graph and alarm mark are displayed.



Bar graph

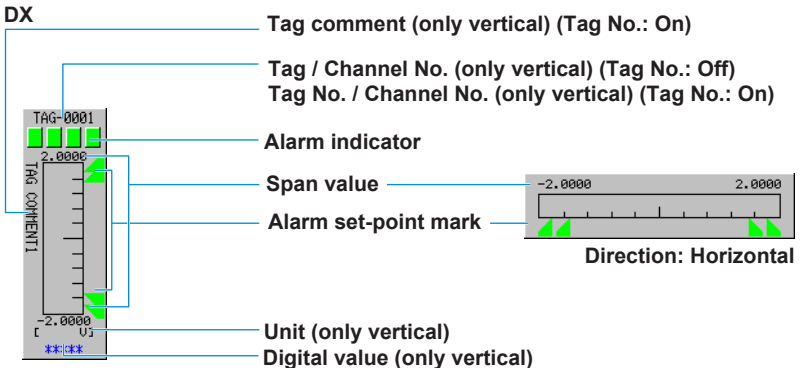
Bar graph, tag comment/tag No./channel No., alarm indicator, span, tag comment, alarm mark, unit, and digital value are displayed.

GX/GP



Direction: Vertical

DX



Direction: Vertical

Note

- For the GX, the number of digits that appears in the text for digital values varies depending on the channel type.
  - I/O channel (not log): ********
  - I/O channel (log, one decimal place): ********
  - I/O channel (log, two decimal places): *********
  - Math, communication channel: **********
- For the DX, tags (tag comments) may be displayed as blank (space), depending on the channel's font (tag comment or tag font) setting. Refer to Section 3.3 for the character types provided for each font (character size).

Tag No.

The tag No. of the specified channel is displayed.

Tag string, TagComment

Display of the tag comments of the specified channel

Note

For the DX, text may be displayed as blank (space), depending on the font setting. Refer to Section 3.3 for the character types provided for each font (character size).

Unit

The unit of the specified channel is displayed.

Span, SpanU, SpanL

The upper/lower limit value of the specified channel are displayed.

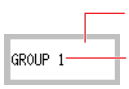
Alarm indicator

The alarm status of the specified channel is displayed. Refer to the User's Manual (IM 04L41B01-01E or IM 04L42B01-01E) of the GX/GP/DX recorder for the alarm status matching text and display color.

Status display components (can be set on recorders other than DXAdvanced R3)

Group name

This component displays the group name corresponding to the specified group number. You can create this group name component when you want to display components from multiple groups, or if setting the status area to No display eliminates the group name.



If you set Change group to On in the attribute settings, the group name changes.

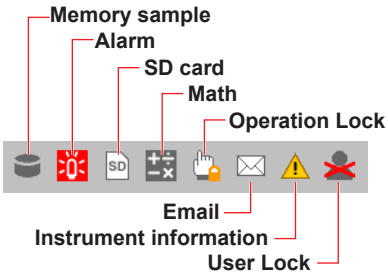
Vertical display (can be set only in DXAdvanced R4.01 screen and R4.11 screen)

System icon

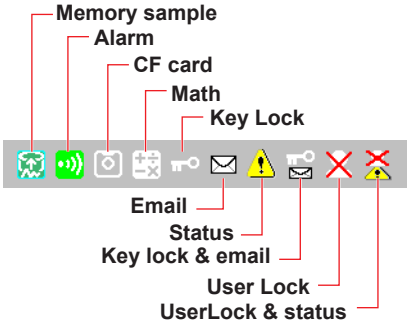
Creates a system icon for display in the status area. You can create icons that display only the items you wish in the screen, for use when not displaying the status area.

The size of the icon component frame is set under Icon size in the attribute settings.

GX/GP



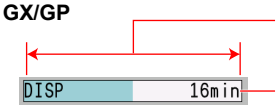
DX



Memory bar

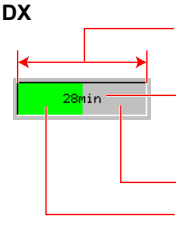
This component appears in the status area and shows the progress of memory sampling. The width of the memory bar component frame represents the file save interval (display data) or data length (event data), and shows the remaining time for memory sampling.

GX/GP



DAQStudio displays the time as ***.

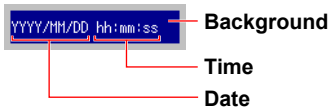
DX



For event data, the status is displayed as a text label.
This is not displayed on DX recorders with the /AS1 option.

DateTime, Time label

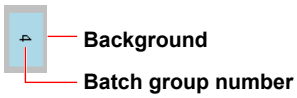
This component displays the current date and time.
You can create this Date and time component if setting the status area to No display eliminates the date and time.



Vertical display (can be set only in DXAdvanced R4.01 screen and R4.11 screen)

Batch group number (can be set only in DX)

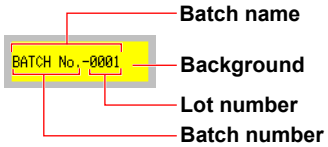
This component displays the batch group number for MultiBatch.
You can create this Batch group number component if setting the status area to No display eliminates the batch group number. The Batch group number component can only be created when the DX recorder is set to use the MultiBatch feature.



Vertical display

Batch name

This component displays the batch name. You can create this Batch name component if setting the status area to No display eliminates the batch name.
The component displays the batch name, batch number, and lot number separated by hyphens. When the width of text exceeds component width, the text wraps at the component width.
Batch number and lot number are displayed by following the procedure below.
GX/GP: MENU key > [Universal] tab > [Batch]
DX: FUNC key > Batch soft key
On the DX, when Batch is Off, batch name components cannot be created and their attributes cannot be edited.

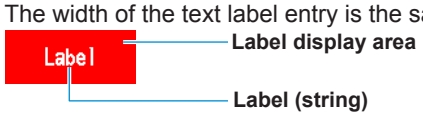


Vertical display (can be set only in DXAdvanced R4.01 screen and R4.11 screen)

Label components

Label

Display text.
You can double-click a component to directly input a text label. After directly inputting a text label, press the Enter key or click anywhere outside the component.
The width of the text label entry is the same as that of the component.



Vertical display (can be set only in DXAdvanced R4.01 screen and R4.11 screen)

Note

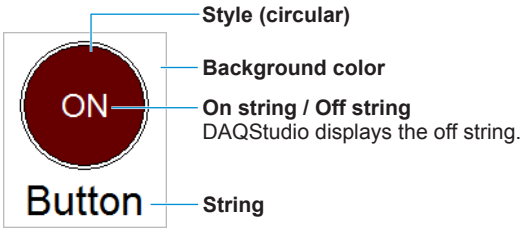
Text may be displayed as blank (space), depending on the font setting. Refer to Section 3.3 for the character types provided for each font (character size).

Components with action functions

Action functions operate on the custom display execution screen of the GX/GP/DX recorder.

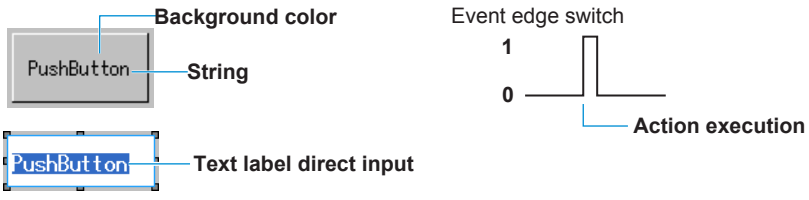
Button operation (GX/GP only)

Displays a button. On the GX/GP, this component is used for Write bit, Write constant, Change display, and Comm command.
Write bit is used to perform an action specified by Bit act through a communication channel on an externally connected device or communication channel. The available bit actions are Set bit, Reset bit, and Reverse bit.
Write constant is used to write a specified constant through a communication channel to an externally connected device or communication channel.
Change display is used to switch to the screen with the specified custom display number.
Comm command is used to execute a specified communication command. The only communication commands that can be specified are operation commands.
For Write bit and Write constant, if the specified communication channel is registered in the GX/GP recorder command settings, the destination device or register is determined from the command number. If it is not registered, the bit or constant is written directly to the communication channel.
If the specified communication channel is registered in multiple command numbers, larger command numbers take precedence.



Push button (DX only)

Display a push button. This has no action function on the builder screen of the DX recorder, and on the custom display execution screen it functions as a push button. (select the event switch number in the component attributes.)
When a component is selected on the execution screen of the DX recorder by pressing the **up and down arrow keys** and then the **DISP/ENTER key** is pressed, the set action is executed.
You can double-click a component to directly input a text label. After directly inputting a text label, press the Enter key or click anywhere outside the component.
The width of the text label entry is the same as that of the component.

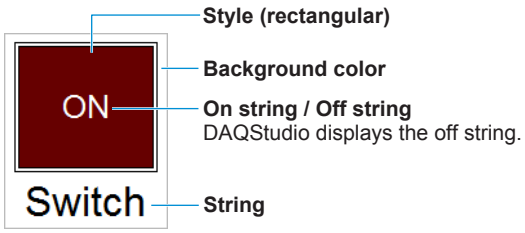


Note

Text may be displayed as blank (space), depending on the font setting. Refer to Section 3.3 for the character types provided for each font (character size).

DO/internal switch (GX/GP only)

Displays a DO or internal switch. On the GX/GP, this component is for switching the on/off state of a DO channel or switch. The state of the DO or internal switch is toggled through touch operation. This operation is invalid if, in the GX/GP recorder settings, the DO range type is set to alarm or the internal switch type is alarm.



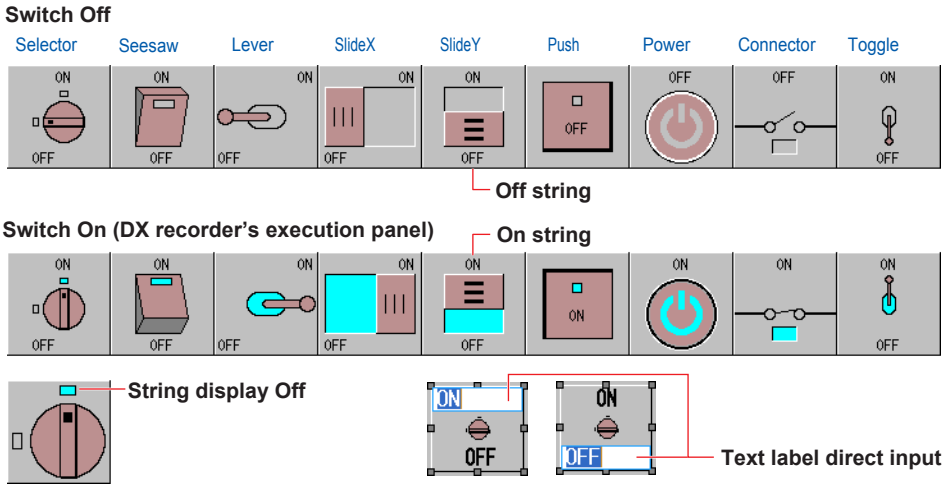
Switch (DX only)

Display switch. The display format of a switch is selected by the item “Style” of the attributes.

This has no action function on the builder screen of the DX recorder, and switch ON/OFF switching is possible on the custom display execution screen.

You can enter a text label directly by double-clicking the text label in the component. After directly inputting a text label, press the Enter key or click anywhere outside the component.

The width of the text label entry is the same as that of the component.

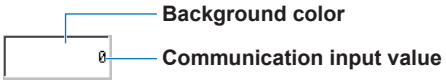


Note

The On and Off string may be displayed as blank (space), depending on the font setting. Refer to Section 3.3 for the character types provided for each font (character size).

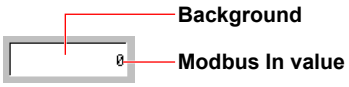
Communication input (DX only)

This has no function on the builder screen of the DX recorder, and on the custom display execution screen, the value of the specified communication input data can be displayed and values can be entered to communication input data.



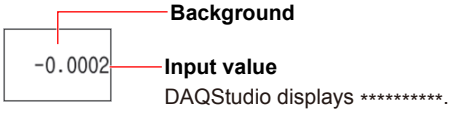
Modbus In (only on DXAdvanced R4.01 and R.4.11)

Displays the input value of the communication channel set using the specified send command number. If an action function is executed, numerical values can be entered from a DX recorder custom display, and the values can be written to the write destination (such as a temperature controller SP) set using the specified command number.



Numeric operation (GX/GP only)

Displays the input value of a specified communication channel. If an action function is executed, numerical values can be entered from a custom display, and the values can be written to the write destination (such as a temperature controller SP).
If the specified communication channel is registered in the GX/GP recorder command settings, the destination device or register is determined from the command number. If it is not registered, the bit or constant is written directly to the communication channel.
If the specified communication channel is registered in multiple command numbers, larger command numbers take precedence.

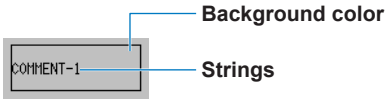


DAQStudio displays **********.

Components for comment display

Comment box (DX only)

The text corresponding to the comment box No. of the DX recorder is displayed.

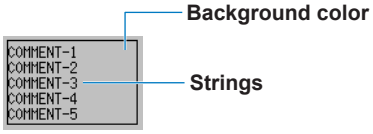


Note

Text may be displayed as blank (space), depending on the font setting. Refer to Section 3.3 for the character types provided for each font (character size).

Comment block (DX only)

The text corresponding to the comment block No. of the DX recorder is displayed.



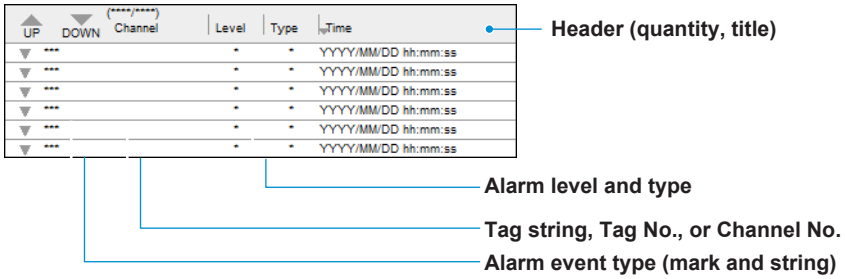
Note

Text may be displayed as blank (space), depending on the font setting. Refer to Section 3.3 for the character types provided for each font (character size).

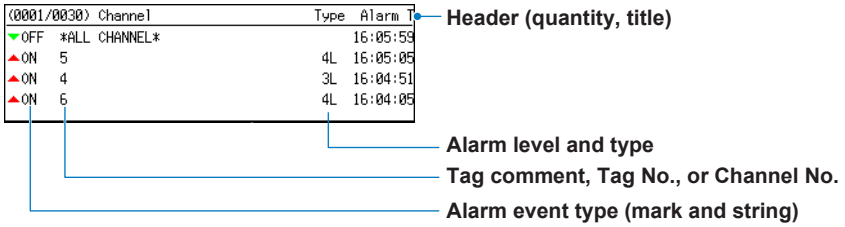
Components for summary display and list display

Alarm summary, Alarm list

An alarm summary is displayed.

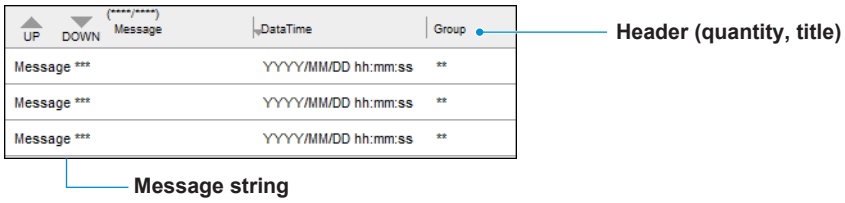


Only the header is displayed on the builder screen of the DX recorder.

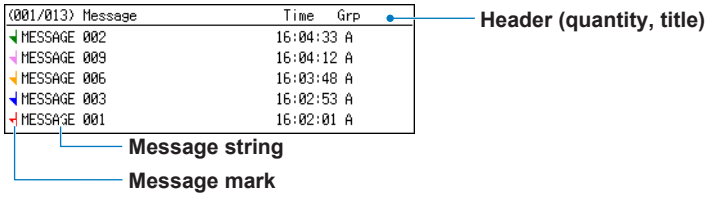


Message summary, Message list

A message summary is displayed.



Only the header is displayed on the builder screen of the DX recorder.



Components for trend display

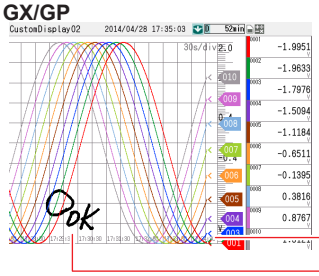
Trend

The trend of the specified group is displayed.

When the time grid display is Off, the trend component time grids are not displayed. If margins are On, a margin of 3% of width is maintained on both sides of the component.

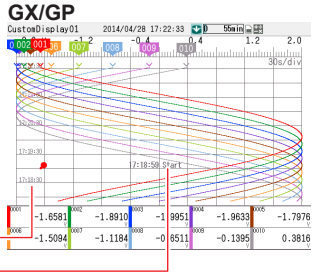
Direction: Horizontal

GX/GP



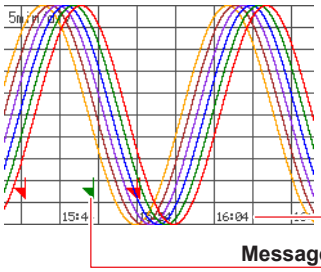
Direction: Vertical

GX/GP

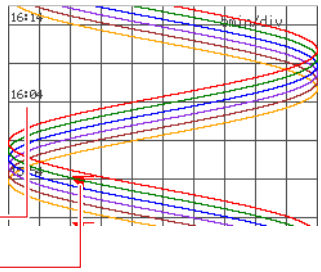


Margin: On, Time interval: Alternate

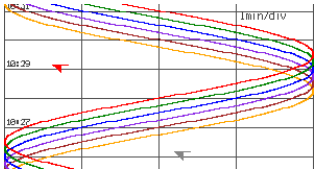
DX



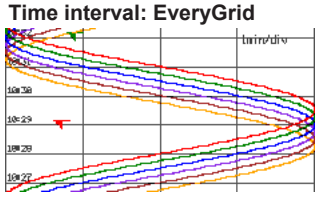
DX



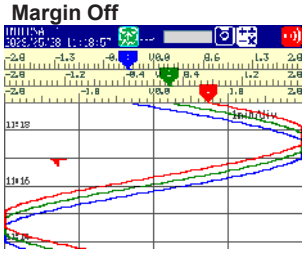
Time interval: Alternate



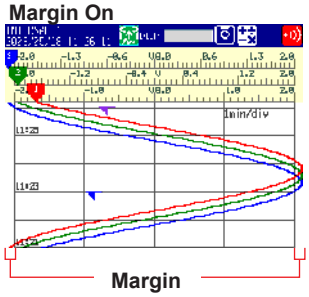
Time interval: EveryGrid



Margin Off



Margin On

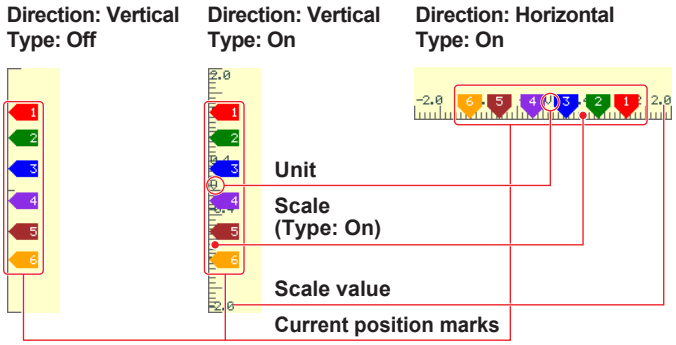


Only the grid is displayed on the builder screen of the DX recorder.

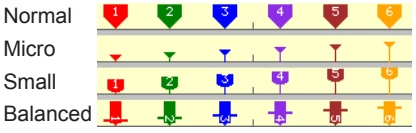
Scale display components (DX only)

Scale

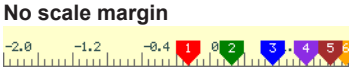
The scale of the specified group is displayed.
Scale plate, scale value, and unit are displayed.
The present value mark is displayed on the custom display execution screen of the DX recorder.



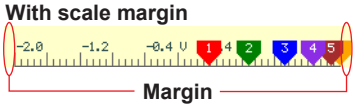
Indicator type



No scale margin



With scale margin



Bitmap components can be assigned to scale components.
If bitmap components overlap with scale components that display bitmap components, only the bitmap of the component in front is displayed.
If alarm marks overlap, the alarm of highest level is brought to the front and displayed.
If a bitmap file that is not supported by the DX recorder is specified for a scale component, an X appears in the component.
If margins are On, a margin of 3% of width is maintained on both sides of the component.

Components for static image display

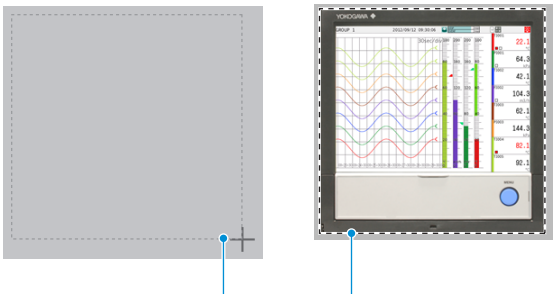
Image (GX/GP only), Bitmap (DX only)

On the GX/GP, this component displays a PNG file. On the DX, this component displays a bitmap file.

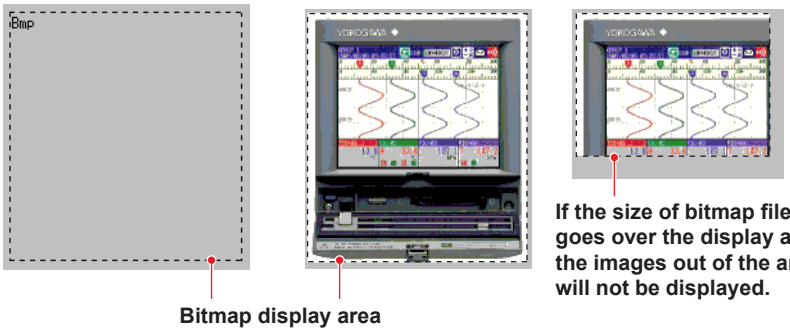
If bitmap components overlap, only the one in front is displayed.

If a bitmap file that is not supported by the DX recorder is specified, an X appears in the component.

GX/GP



DX


Bmp
If the size of bitmap file read goes over the display area, the images out of the area will not be displayed.
Bitmap display area

Note

Conditions for images which can be read in (GX/GP)

- 24-bit RGB or 32-bit RGBA
- Image size: The file will not be read in if either the width or height is exceeded.
  GX10/GP10: Within 640 (width) × 480 (height) pixels
  GX20/GP20: Within 800 (width) × 600 (height) pixels

Conditions for bitmaps which can be read in

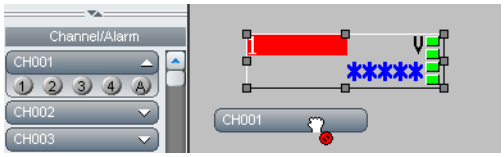
- A format with up to 256 colors (even when less than 256 colors are used, they may not be read in depending on the format).
- A size within 640 (width) x 480 (height) pixels (the file will not be read in even when only one dimension is exceeded).

2.9 Assigning Channels, Alarms, Groups, Batch Groups, and Bitmaps to Components

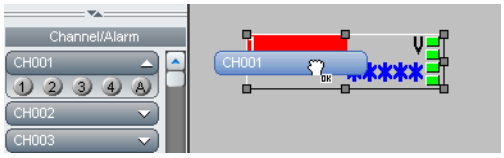
Assigning a channel to a component

Procedure

1. Select the channel to be assigned in the channel/alarm list, drag it to the component, and drop it there.
   If a channel cannot be set, the mouse pointer displays " ."



If a channel can be set, the mouse pointer displays " ."



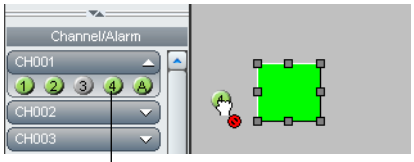
Explanation

Channel assignment is possible only for components for channel assignment.

Assigning an alarm to a component

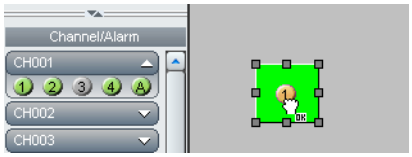
Procedure

1. Select the channel to be assigned in the channel/alarm list.
   The alarm level kind is displayed.
2. Select an alarm level.
3. Drag the alarm to the object to which it is to be assigned and drop it there.
   The alarm is assigned.
   When an alarm is dragged to an object to which an alarm cannot be assigned, the mouse pointer displays " ."



When this is green, alarm On is set for the DX recorder.

If an alarm can be set, the mouse pointer displays " ."



Explanation

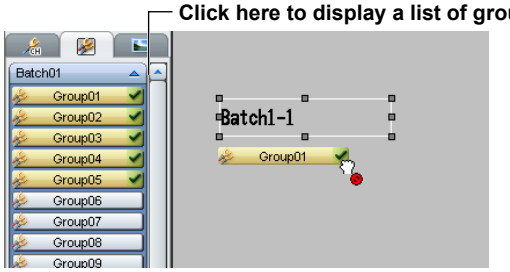
Alarms can be assigned only to alarm indicator components.
Channel alarm numbers for measuring channels of the GX/GP/DX recorder with alarm set to On when custom display screen data are received from the GX/GP/DX recorder are green.

Assigning group numbers to components

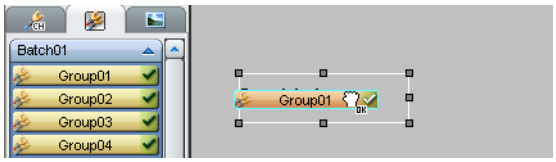
Procedure

1. Drag the group you wish to assign from the Group list onto a component. Or, you can display the Group list within a batch group on the Batch list, then drag a group from that list onto a component.

   If a group cannot be set, [ ] appears next to the pointer.



   If a group can be set, [ ] appears next to the pointer.



Explanation

Groups can be assigned to trends, scales, and group names.

Assigning batch numbers to components (DX only)

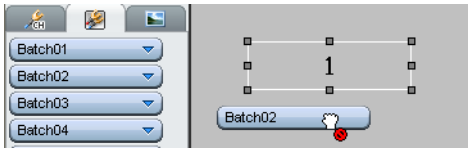
Procedure

1. On the Batch list, select a non-assigned batch

   The batch group numbers are displayed in the list.

2. Select a desired group number, and drag it onto a component.

   If a group cannot be set, [ ] appears next to the pointer.



   If a group can be set, [ ] appears next to the pointer.

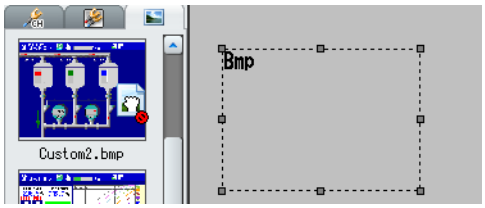
Explanation

Batch group numbers can be assigned to Message lists, Alarm lists, Memory bars, Batch group numbers, and Batch names.

Assigning images (PNG/BMP) to components

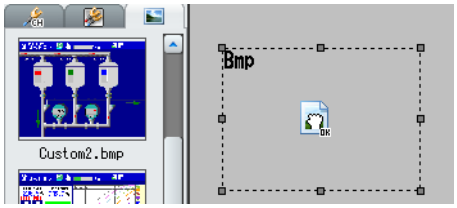
Procedure

1. Drag the image from the image list

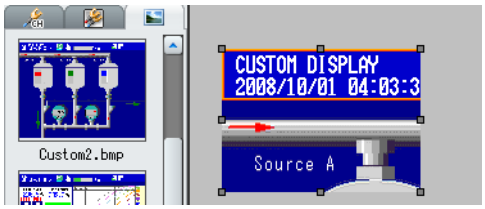


2. Drop the image onto a bitmap or other component in the screen construction area.

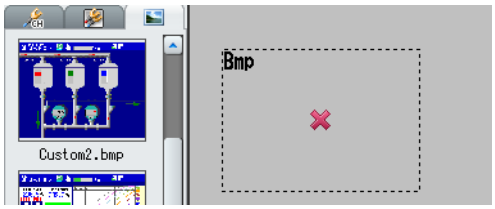
If the image cannot be set, [ ] appears next to the pointer.
If the image can be set, [ ] appears next to the pointer.



For bitmap components, bitmaps assigned when [Disp. on editing] was set to On are displayed.



If the bitmap cannot be assigned to the component, an X appears in the component.



Explanation

Limitations on assigning images to components

A maximum of 500 image files (PNG or BMP) can be displayed in the Image list. When assigning an image, only 500 image files are shown no matter how many image files you copy to the image folder.

Note

Image file names created on a PC can become garbled when displayed on the GX/GP/DX.
Supported characters ▶Section 3.3

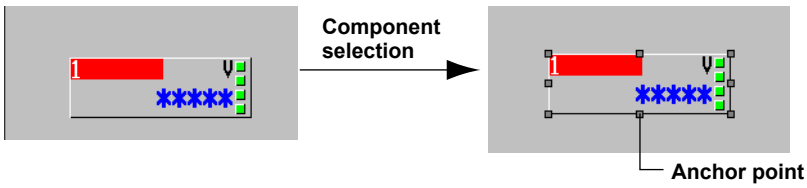
2.10 Editing Components and the Screen

Selection and deselection of components, movement, magnification/contraction

Procedure

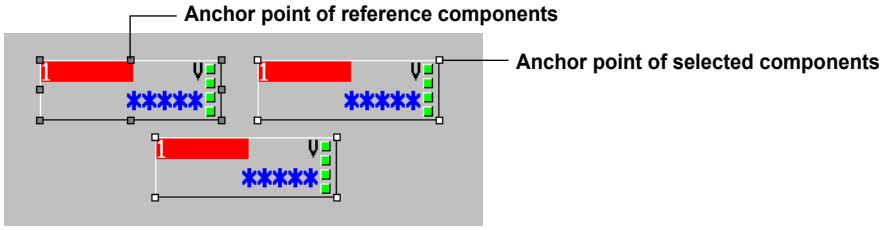
Selecting one component

1. Click the **Edit** icon on the Components bar.
2. Click a component to be selected.
   The component becomes selected. A gray anchor point is displayed on the component.



Selecting multiple components

1. Click the **Edit** icon on the Components bar.
2. Click multiple components to be selected while depressing the **SHIFT** key or the **Ctrl** key. You can also drag the screen construction area and create a rectangle with a size to include all components to be selected.
   Multiple components are selected. A white and a gray anchor point are displayed on the component. A gray anchor point is displayed on the reference component.



Cancellation of component selection

Click a selected component with the Shift key depressed.
The anchor point of the component disappears and the selected status is cancelled.

Making a component a reference component

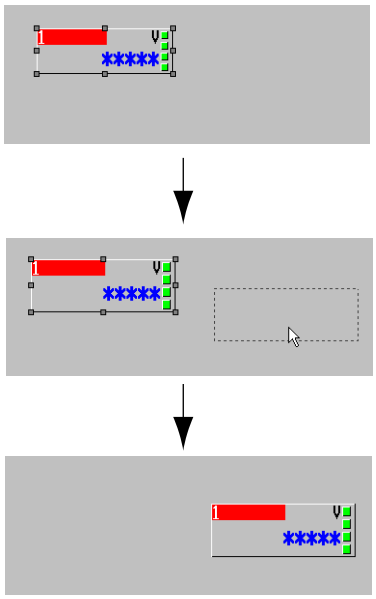
Click a component with a displayed white anchor point out of a group of selected components while keeping the **Ctrl** key pressed.
The reference component is switched.

Note

For circle and rectangle components, if the background attribute (▶section 3.31 and 3.32) is set to [None], drag the component's outline to move it.

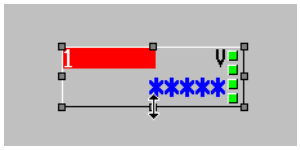
Moving parts

1. Select one or several parts to be moved.
2. Press the **arrow keys** (←↓→↑) on the keyboard to move them by one grid each. Selected components also can be moved by dragging them with the mouse pointer.



Magnifying/contracting components

1. Click the **Edit** icon and then select a component.
2. Move the mouse pointer onto the square anchor point displayed on the circumference of the selected component.
   The mouse pointer changes to an arrow.



3. Drag in direction of the arrow.
   The component is magnified/contracted.

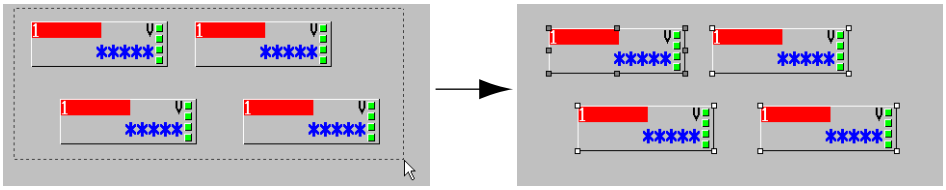
Note

Component magnification/contraction is not possible when multiple components are selected.

Explanation

Reference component

The anchor point of a reference component is displayed in gray.
When multiple components are selected, the attributes of the reference component are displayed in the attribute area. This becomes the reference for rearrangement of components.
When only one component is selected, that component becomes the reference component. When multiple components are selected, the component with the left top apex coordinates arranged most to the top left becomes the reference component (the Y-coordinate has priority). When the left top apex coordinates of components are the same, the component on the top plane becomes the reference component.



When the reference component of multiple selected components is deleted or the selection is cancelled, the anchor point of the component which becomes the reference component according to the above rule becomes gray.

Moving components

If the reference component is a line component

The selected component cannot be moved beyond the border of the screen construction area.
The upper left apex of a rectangle joined to a line component moves along the grid, but the other selected components retain their positions relative to the reference component as they move.

If the reference component is not a line component

The selected component cannot be moved beyond the border of the screen construction area.
The upper left apex of the reference component moves along the grid, but the other selected components retain their positions relative to the reference component as they move.

Moving components with the keyboard arrow keys

After selecting a component with the mouse, you can press arrow keys on the keyboard to move the component within the screen construction area by grid intervals. (Not limited to being on the grid.)

Restrictions on zooming in/out on components

For line components

If the start and end points overlap, the end point is placed 1 dot along the X axis away from the start point.

For components other than lines

The component's minimum height and width is 2 dots.
The upper left apex of the component is placed on the grid, and the lower right apex is positioned at (grid - 1).

Display/No display of the status area

When switching the status area from [No display] to [Display], components overlapping the status area move into the screen display area. Also, if the height of a component exceeds the maximum value for the screen construction area, the height is changed to the maximum value.

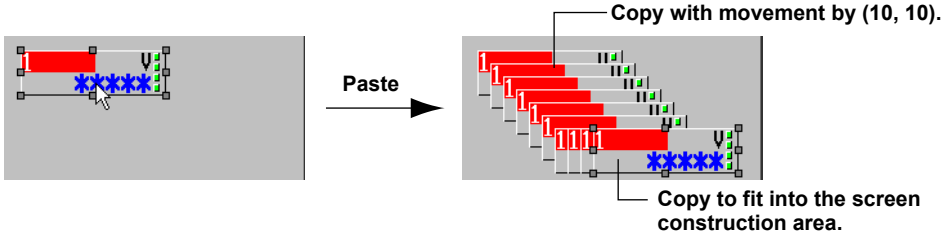
Copy/Cut/Paste/Delete/Add for components and screens

After components or display data have been created, Copy, Cut, Paste, Delete, and Add can be performed for efficient creation of monitor screens.

Procedure

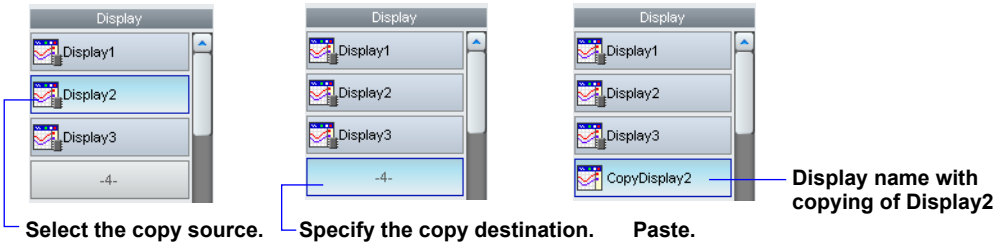
Component Copy and Paste

1. Click the **Edit** icon of the Components bar and click the component to be copied.
2. Select **Edit > Copy** from the menu bar or click the **Copy** icon.
   The component is copied to the clipboard.
3. Select **Edit > Paste** from the menu bar or click the **Paste** icon.
   The component is pasted to a location moved by (10, 10) from the coordinates of the copied component. With the second paste operation, the component is pasted to a location moved by (10, 10) from the previously copied component.
   When coordinates are specified where a part of the components no longer is displayed on the screen construction area, the component is arranged so as to fit into the screen construction area.



Screen Copy and Paste

1. Click the display name to be copied in the display list area.
2. Select **Edit > Copy** from the menu bar or click the **Copy** icon.
   The screen is copied to the clipboard.
3. Click any location (copy destination) on the Display list area.
4. Select “Paste” from the Edit menu or click the Paste icon.
   The display data are copied. The file name becomes “Copy” + “Display name of the copy source.”



Component Cut and Paste

1. Select one or several components.
2. Select **Edit > Cut** from the menu bar or click the **Cut** icon.
   The component is moved to the clipboard.
3. Select **Edit > Paste** from the menu bar or click the **Paste** icon.
   The component is pasted into its original position.

Screen Cut and Paste

1. Select a Display name from the Display list.
2. Select **Edit > Cut** from the menu bar or click the **Cut** icon.
   The display data are moved to the clipboard.
   An item No. is displayed for the display name at the movement source.
3. Select **Edit > Paste** from the menu bar or click the **Paste** icon.
   A message is displayed.
4. Click **[OK]**.
   The display data is pasted.
   The display name becomes “Copy” + “Display name of the copy source.”

Note

On the DX, the top three display names in the display list area cannot be cut.

Deleting a component/screen

1. Select the component or display name to be deleted.
2. Select **Edit > Delete** from the menu bar.
   The component is deleted.
   When display data are deleted, a message is displayed.
3. Click **[OK]**.
   The display data are deleted.

Note

On the DX, the top three display names in the display list area cannot be deleted.

Adding a screen

1. Select the position (item No.) in the Display list where a screen is to be added.
2. Select **Edit > Add Display** from the menu bar or click the **Add Display** icon.
   The display name is displayed in the display list as follows. The data are blank.
   GX/GP: “CustomDisplay” + “Item No.”
   DX: “Display” + “Item No.”
   Copied or cut display data can be pasted.

Undo/Redo of a screen or component editing operation

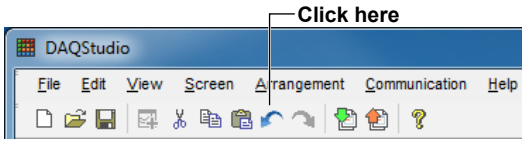
You can undo an edit made to a component or screen. Also, if you undo an edit, you can redo it.

Editing operations also include section 2.11, “Arranging Components.”

Procedure

Undo

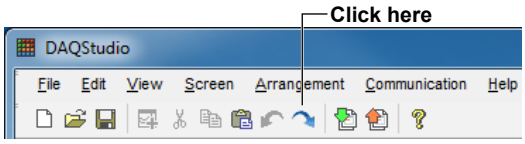
1. On the tool bar, click the [Undo] button, or on the menu bar, click **Edit > Undo**.



The most recent edit operation is undone.

Redo

2. On the tool bar, click the [Redo] button, or on the menu bar, click **Edit > Redo**.



The edit operation is redone.

Explanation

If a component is selected in a screen that is being edited and you switch to a different screen, the component is no longer selected when you return to the original screen. However, the display and functioning of the [Redo] and [Undo] buttons is not affected.

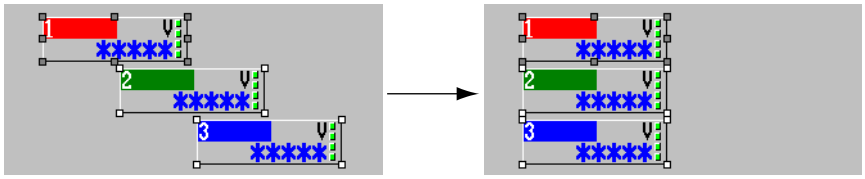
2.11 Arranging Components

Use the icons of the Arrangement bar to change the arrangement and the size of components.

Procedure

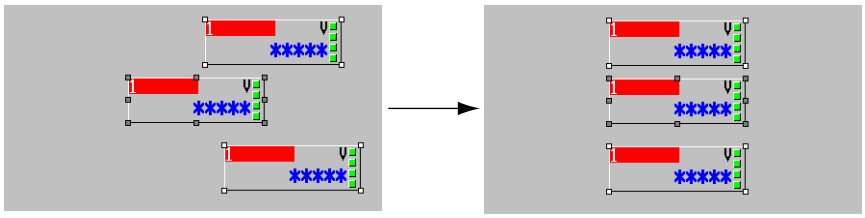
Arranging components aligned with the left edge

1. Select multiple components.
2. Select **Arrangement > Left** from the menu bar or click the **Left** icon on the Arrangement bar.
   The selected components are arranged with the left edge of the reference component as reference.



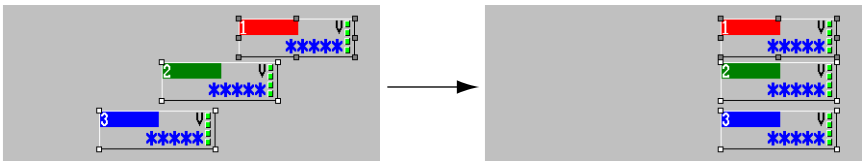
Arranging components at the center of the horizontal direction

1. Select multiple components.
2. Select **Arrangement > Horizontal Center** from the menu bar or click the **Horizontal Center** icon on the Arrangement bar.
   The selected components are arranged with the center in X-axis direction of the reference component as reference.



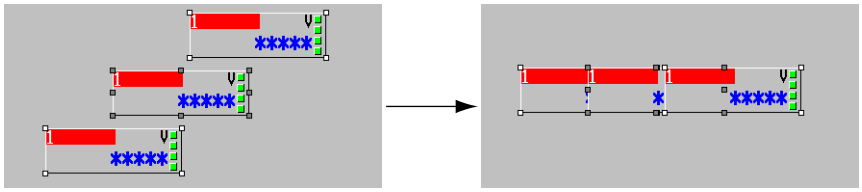
Arranging components aligned with the right edge

1. Select multiple components.
2. Select **Arrangement > Right** from the menu bar or click the **Right** icon on the Arrangement bar.
   The selected components are arranged with the right edge of the reference component as reference.



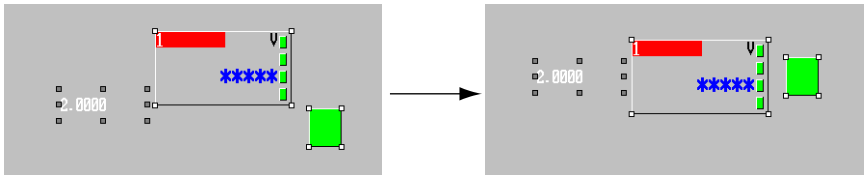
Arranging components aligned with the top edge

1. Select multiple components.
2. Select **Arrangement > Top** from the menu bar or click the **Top** icon on the Arrangement bar.
   The selected components are arranged with the top edge of the reference component as reference.



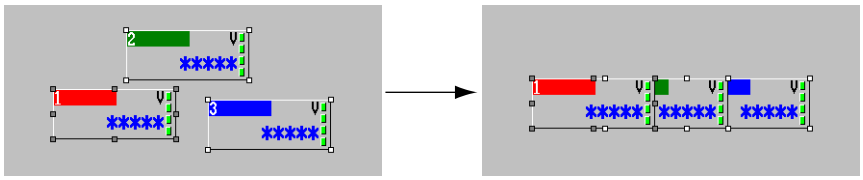
Arranging components aligned with the center in vertical direction.

1. Select multiple components.
2. Select **Arrangement > Vertical Center** from the menu bar or click the **Vertical Center** icon on the Arrangement bar.
   The selected components are arranged with the center in Y-axis direction of the reference component as reference.



Arranging components aligned with the bottom edge

1. Select multiple components.
2. Select **Arrangement > Bottom** from the menu bar or click the **Bottom** icon on the Arrangement bar.
   The selected components are arranged with the bottom edge of the reference component as reference.



Proportional horizontal distribution of components

1. Select multiple components.

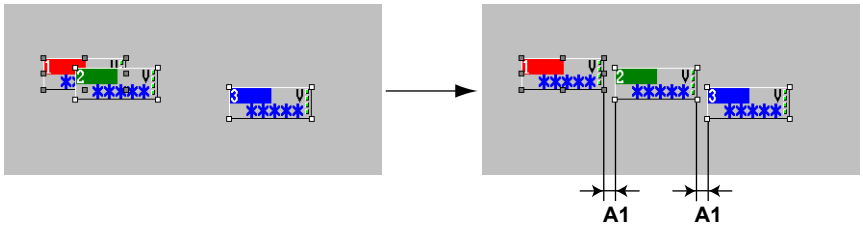
2. On the Arrangement menu, click [Distribute horizontally], or click the distribute horizontally icon on the arrangement bar.

The selected components are arranged with proportional horizontal spacing.

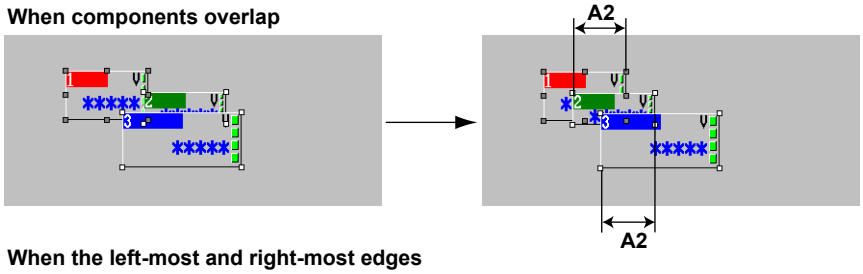
If the X coordinate of multiple selected components is the same, components are arranged to the right in order starting from the component in front.

When distributing components horizontally, spacing errors of 1 dot can occur.

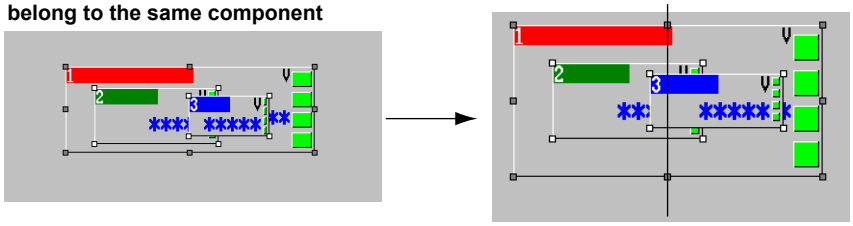
When components do not overlap



When components overlap



When the left-most and right-most edges belong to the same component



Align component centers horizontally

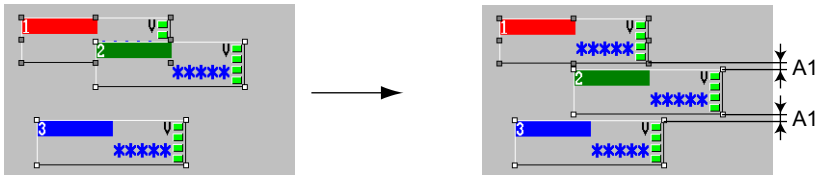
Proportional vertical distribution of components

1. Select multiple components.

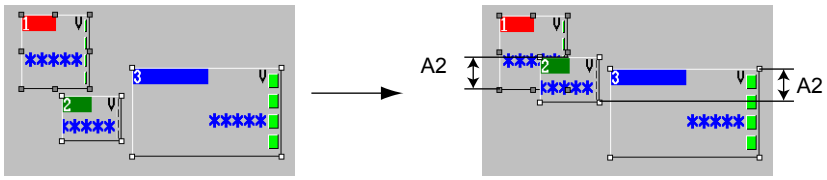
2. On the Arrangement menu, click [Distribute vertically], or click the distribute vertically icon on the arrangement bar.

The selected components are arranged with proportional vertical space between them.
If the X coordinate of multiple selected components is the same, components are arranged to the right in order starting from the component in front.
When distributing components vertically, spacing errors of 1 dot can occur.

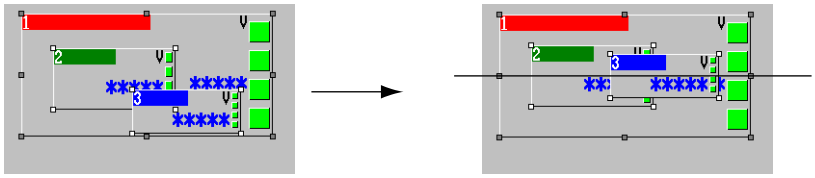
When components do not overlap



When components overlap



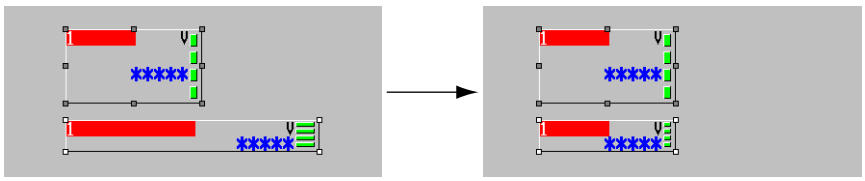
When the top-most and bottom-most edges belong to the same component



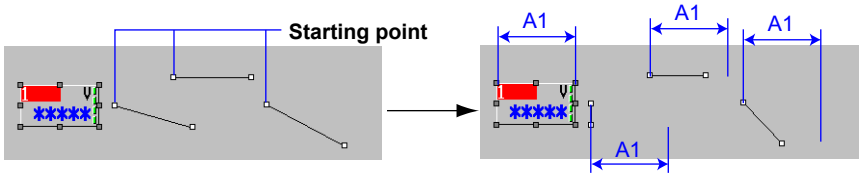
Align component centers vertically

Making the width of components the same as that of the reference component

1. Select multiple components.
2. Select **Arrangement > Width** from the menu bar or click the **Width** icon on the Arrangement bar.
   The width of the selected component is made the same as that of the reference component.

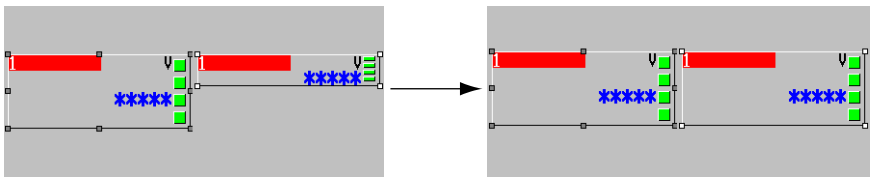


For a line component, keep the start point fixed and adjust the end point to the left or right.

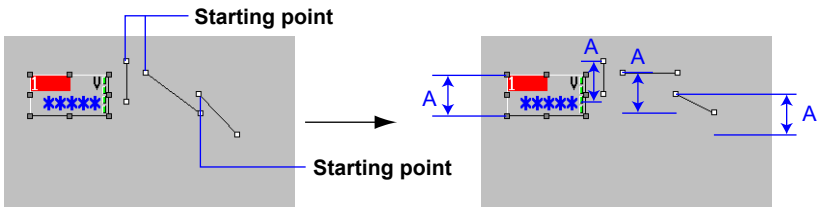


Making the height of components the same as that of the reference component

1. Select multiple components.
2. Select **Arrangement > Height** from the menu bar or click the **Height** icon on the Arrangement bar.
   The height of the selected components becomes the same as the height of the reference component.



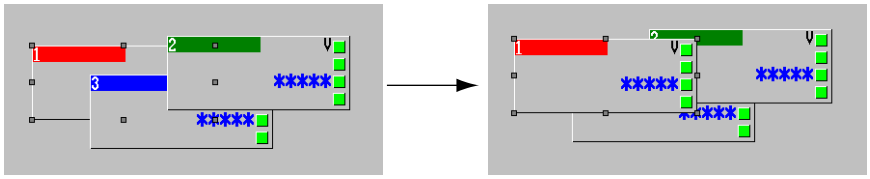
For a line component, keep the start point fixed and adjust the end point up or down.



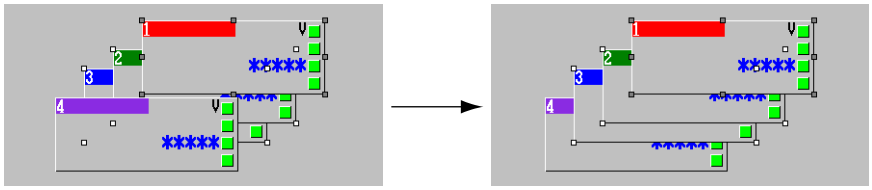
Arranging components to the Top plane

1. Select one or several components.
2. Select **Arrangement > To Top** from the menu bar or click the **To Top** icon on the Arrangement bar.
   The selected components are arranged on the top plane. When multiple components have been selected, the display sequence of the components is arranged to the top as it is.

Arranging one component to the top plane



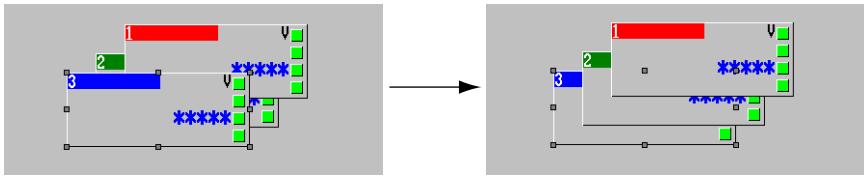
Arranging multiple components to the top plane



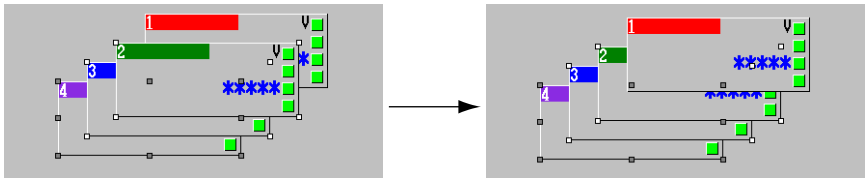
Arranging components to the Bottom plane

1. Select one or several components.
2. Select **Arrangement > To Bottom** from the menu bar or click the **To Bottom** icon on the Arrangement bar.
   The selected components are arranged on the bottom plane. When multiple components have been selected, the display sequence of the components is arranged to the bottom as it is.

Arranging one component to the bottom plane



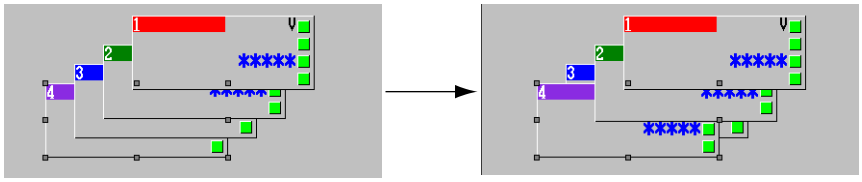
Arranging multiple components to the bottom plane



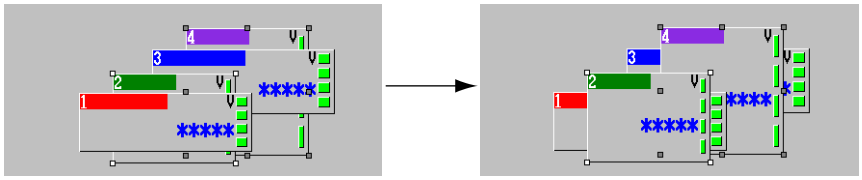
Arranging components to the Front

1. Select one or several components.
2. Select **Arrangement > To Front** from the menu bar or click the **To Front** icon on the Arrangement bar.
   The selected components are arranged one plane to the front. When multiple components have been selected, each component is arranged one plane to the front.

Arranging one component one plane to the front



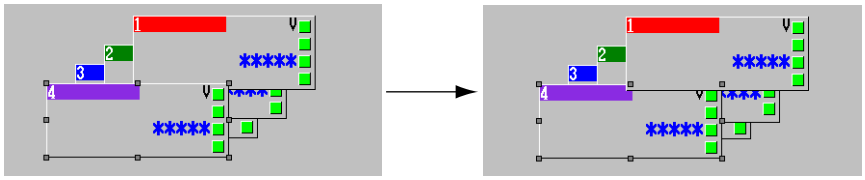
Arranging multiple components each one plane to the front



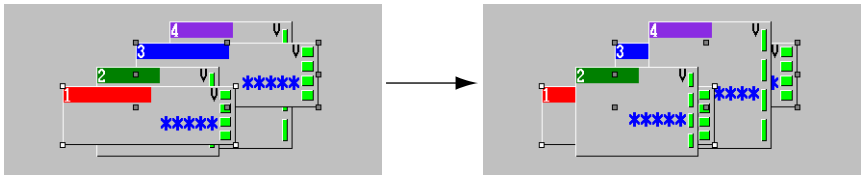
Arranging components one plane to the back

1. Select one or several components.
2. Select **Arrangement > To Back** from the menu bar or click the **To Back** icon on the Arrangement bar.
   The selected components are arranged one plane to the back. When multiple components have been selected, each component is arranged one plane to the back.

Arranging one component one plane to the back



Arranging multiple components each one plane to the back

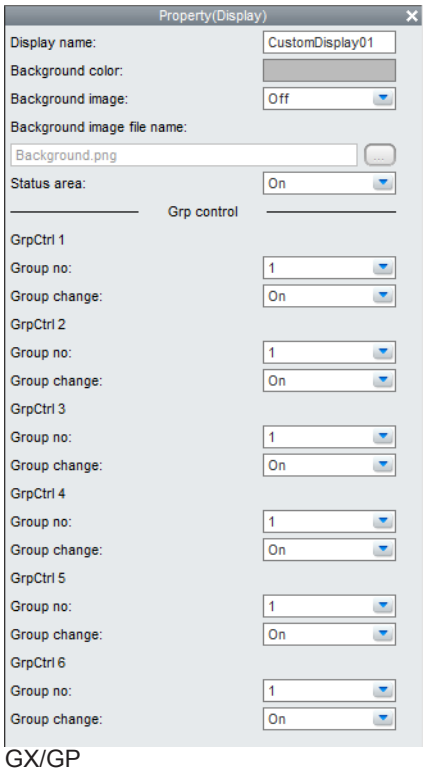


2.12 Setting Attributes

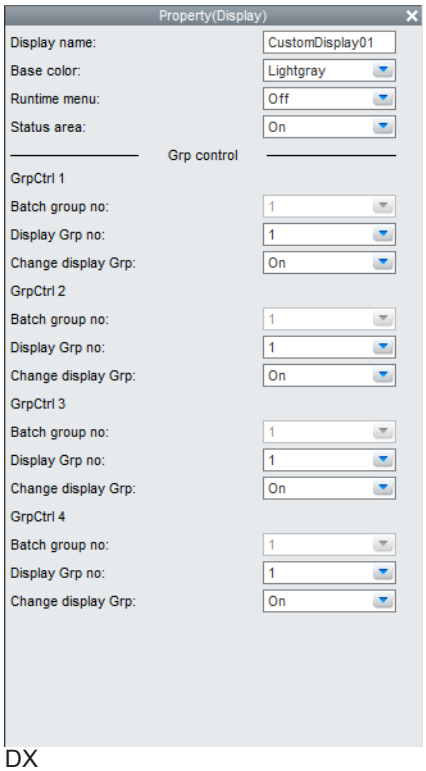
Setting screen attributes

Procedure

1. Click the background part (a place with no components) of the screen construction area.
   The attributes of the screen being created are displayed in the attribute area.



GX/GP



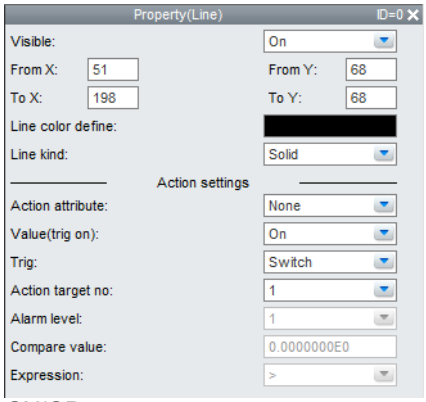
DX

2. Set the display name, background color (base color for the DX), status area, and so on.
   Refer to Chapter 3 for details of the setting items.

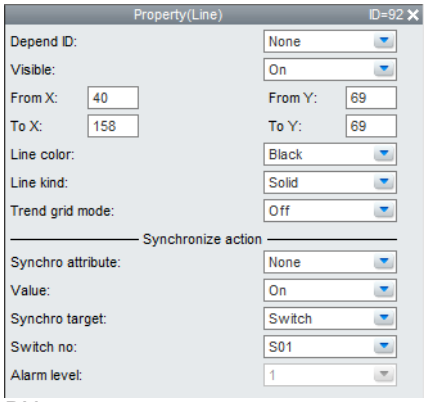
Setting component attributes

Procedure

1. Select a component.
   The attributes of the selected component are displayed in the attribute area.



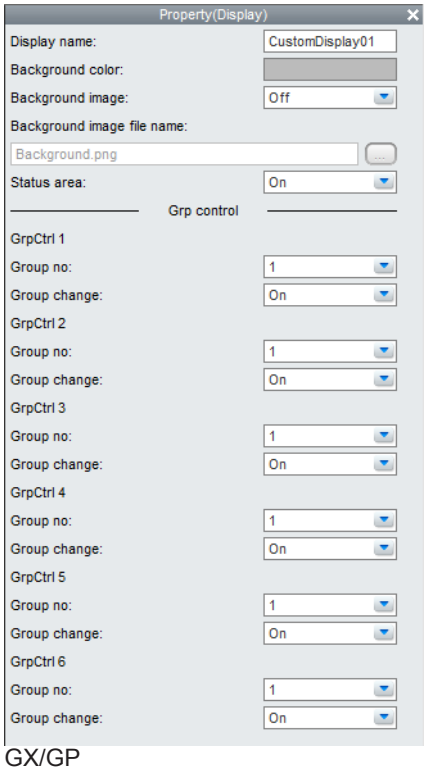
GX/GP



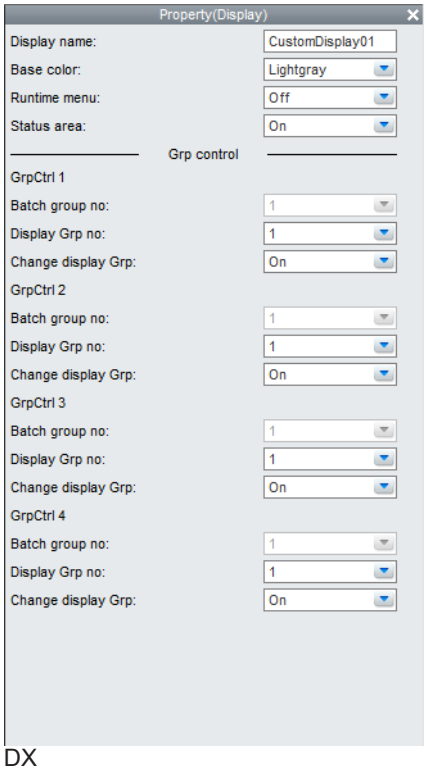
DX

2. Values can be entered directly or a list box can be displayed and settings can be changed.
   Refer to Chapter 3 for details of the setting items.

3.1 Screen Attributes



GX/GP



DX

List of Settings

Attribute name	Set value/choice (Underlined items are initial set values)		Description
	GX/GP	DX	
Display name	[CustomDisplayXX]	[DisplayXX]	Up to 16 characters on the GX/GP Calculation method: Based on the following Unicode values 1 character for U+0000 to U+007F 1.5 characters for U+0080 to U+07FF 2 characters for U+0800 to U+FFFF
			Up to 16 single-byte (8 double-byte) characters on the DX Changes the Display name displayed in the Display list area. This is displayed below the Components bar on the Main screen.
Background color	RGB designation [187, 187, 187]	-----	Set the background color of the screen. Components not having a background color are painted with the color set here.
Base color	-----	[Light gray], [Light blue], [L orange], [Aquamarin], [Dark gray], [Dark blue], [Dark green], [White], [Black]	
Background image	[Off], [On]	-----	This selects whether to display an image for the screen background by specifying [On] or [Off].
Background image file name	[Background.png]	-----	Up to 64 single-byte characters Double-byte characters are replaced with underscores.
Runtime menu	-----	[Off], [On]	Select display/hide for the soft-key menu of the custom display execution screen of the DX recorder. On: Display the soft-key menu. Off: Hide the soft-key menu.

Continued on the next page

Attribute name	Set value/choice (Underlined items are initial set values)		Description
	GX/GP	DX	
Status area (Cannot be set on DX Advanced R3)	[Off], [On]	[Off], [On]	Select Display/No display for the status area. When set to [Off], the screen construction area becomes larger. The following occurs when switching the status area from No display to Display. When components overlap the status area, they move into the screen display area. Also, if the height of a component exceeds the maximum value for the screen construction area, the height is changed to the maximum value.
Batch group number	-----	Setting range: 1 to multi-batch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group number that can be selected within the range of the number of multibatches set in the basic settings on the GX/GP/DX recorder. This item cannot be set if MultiBatch is turned Off.
Display Grp no	GX10: [1] to [30] GX20-1: [1] to [50] GX20-2: [1] to [60]	When multi-batch is Off DX1000: [1] to [10] DX2000: [1] to [36] When multi-batch is On DX1000: [1] to [6] DX2000: [1] to [12]	Group control is performed for components. Display groups can be switched with the left and right arrow keys on the execution screen of the GX/GP/DX recorder. Display on the builder screen of the GX/GP/DX recorder is made as “Group No.”. For components having a group No. in the attributes (trend and scale), the group No. is switched. For components having only a channel No., the channel No. is switched.
Display group switching (Cannot be set on DX Advanced R3)	[Off], [On]	[Off], [On]	Sets whether or not to switch display groups. Off: Display groups not switched On: Display groups switched

“-----” in the table indicates that the attribute is not available.

Note

If the status area is set to No display, components move or their heights change. To restore positions, click the [Undo] icon on the tool bar. Only one level of Undo is available in this case.
If the status area is set to No display and even just one edit is made to the screen, you cannot return to state before the status area was set to No display. Please be aware of this.

3.2 Component ID No. and Number of Components which can be Created on one screen

When a component is selected in the screen construction area, the setting items of the selected component are displayed in the attribute list. The items which can be set depend on the selected component. The setting items of the attribute area corresponding to each component are explained in the following sections.
Component ID numbers are assigned separate by component kind in order of creation. Also, assignment is made to different ranges by component kinds. The number of components which can be created on one screen is the same as the number of ID numbers which can be assigned, Please refer to the following table.
(The number of components which can be created on the screen is the same as the number of IDs.)

Component type	Component name	Update cycle*1		GX/GP		DX	
		GX/GP	DX	ID number	Number of components which can be created on one screen	ID number	Number of components which can be created on one screen
Components for channel assignment	Simple digital	0.5 sec.	1 sec.	0 to 199	200 *2	0 to 79	80
	Digital	0.5 sec.	1 sec.				
	Simple bar	0.5 sec.	1 sec.				
	Bar	0.5 sec.	1 sec.				
	TagNo.	None	None				
	Tag string	None	None				
	(DX: Tag comment)	None	None				
	Unit	None	None				
	Span	None	None				
	(DX: SpanU)	None	None				
	(DX: SpanL)	None	None				
	Alarm indicator	0.5 sec.	1 sec.				
Status display component	System icon	0.5 sec.	1 sec.				
	Memory bar	0.5 sec.	1 sec.				
	Time label	0.5 sec.	1 sec.				
	Batch group number	None	None				
	Batch name	None	None				
	Group name	None	None				
Label components	Label	None	None				
Components with action functions	Button operation	None	None				
	(DX: Push button)	None	None				
	DOIntSwitch	0.5 sec.	1 sec.				
	(DX: Switch)	0.5 sec.	1 sec.				
	Digital operation	0.5 sec.	1 sec.				
	(DX: Comm In)	0.5 sec.	1 sec.				
	Modbus In	0.5 sec.	1 sec.				
Components for comment display	Comment box	0.5 sec.	1 sec.				
	Comment block	0.5 sec.	1 sec.				
Components for summary display (DX: Components for list display)	Alarm summary	0.5 sec.	1 sec.	206 to 209	4	8 to 83	4
	(DX: Alarm list)	0.5 sec.	1 sec.				
	Message summary	0.5 sec.	1 sec.				
	(DX: Message list)	0.5 sec.	1 sec.				
Components for trend display	Trend	Trend update cycle		200 to 205	6	84 to 87	4
Scale components	Scale	Measurement interval				88 to 91	4

Continued on the next page

3.2 Component ID No. and Number of Components which can be Created on one screen

Component type	Component name	Update cycle*1		GX/GP		DX	
		GX/GP	DX	ID number	Number of components which can be created on one screen	ID number	Number of components which can be created on one screen
Diagram components	Line Rectangle Circle	None None None	None None None	0 to 199	200 *2	92 to 131	40
Components for static image display	Image (DX: Bitmap)	None	None	0 to 199	200 *2	132 to 133	2

***1 The update cycle is the period in which the display updates when data acquisition begins on the GX/GP/DX recorder.**

***2 On the GX/GP, up to 200 components can be created from components for channel assignment, status display components, label components, components with action functions, components for comment display, diagram components, and components for static image display.**

3.3 Common Attributes of Components

The attributes which can be set for each component have items which are common for multiple components.
This section explains the set values of common attributes, the choices, and the conditions.

Explanation of choices and set values

SET

The “SET” displayed for choices are the values which can be set with the setting menu of the GX/GP/DX recorder.
When setting X, Y, width, height, start point X, start point Y, end point X, end point Y, or size, if the setting is invalid it is adjusted automatically.

Font (DX only)

The following character types are available.

Font (character size)	Description
Font 5	English one-byte characters. ISO8859-1 (Some symbols are not available.)
Font 6	
Font 8	
Font 12	
Font 16	
Font 32	

Special display font (DX only)

With some fonts, characters appear differently when entering text labels for setting attributes than they do in the screen construction area. This is also true when entering characters directly into components in the screen construction area.

When entering characters in attribute settings	Display in the screen creation area	Related languages
\	¥	English, German, French, Chinese, Russian, and Korean
^	°	English, Japanese, German, French, Chinese, Russian, and Korean
{	µ	
|	Ω	
}	Half-width space (blank)	

Explanation of common attributes

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Depend ID	-----	[None], [Component ID]	This is the ID of the component on which the component depends. None: There are no components on which this component depends. Component ID: This is the ID of the component on which the component depends.
Visible	[Off], [On]		Changing is not possible if this is dependent on other components (DX only). Changing is possible when Depend ID is set to [None]. Off: Not displayed on the operation screen of the GX/GP recorder or the execution screen of the DX recorder (always displayed on the builder screen) On: Displayed on the operation screen of the GX/GP recorder or the execution screen of the DX recorder

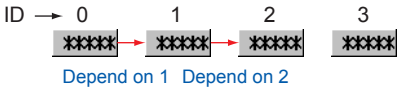
Continued on the next page

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Channel	see page 3-7.		Set the assigned channel No. Setting is possible when Group control is [None].
Frame	[None], [ColorFrame], [Raised], [Sunken]	[None], [Black], [White], [Raised], [Sunken]	This is the component frame kind. None: No frame Color frame: Frame in a specified color Black: Black frame with a solid line with the width of 1 dot White: White frame with a solid line with the width of 1 dot Raised: Frame with a solid line with the width of 1 dot, appearing raised Sunken: Frame with a solid line with the width of 1 dot, appearing sunken The following are the default settings by component. [None]: Label, Simple digital, Digital (GX/GP), Tag No., Tag string, TagComment, Unit, Alarm indicator (GX/GP), Span, SpanL, SpanU, DOIntSwitch, Group Name, System icon, Date Time, Time label, Batch group no., Batch Name, User name, Button operation, Digital operation [Black]: Comment box, Comment block [ColorFrame]: Alarm summary, Message summary [Raised]: Digital (DX), Bar (DX), Alarm indicator, Switch, Alarm list, Message list [Sunken]: Memory bar (DX)
Frame color	RGB designation [0, 0, 0]	-----	Set this attribute when ColorFrame is selected.
Group control	[None], [GrpCtrl 1], [GrpCtrl 2], [GrpCtrl 3], [GrpCtrl 4], [GrpCtrl 5], [GrpCtrl 6]	[None], [GrpCtrl1], [GrpCtrl2], [GrpCtrl3], [GrpCtrl4]	Indicates group control status. None: No group control GrpCtrl1 to 6: indicates group control for group control 1 to 6.
Gr. Ctrl order	GX10/GP10: [1] to [10] GX20/GP20: [1] to [20]	DX1000: [1] to [6] DX2000: [1] to [10]	Indicates the group control order. Setting is not possible when Group control is [None].
Channel information dialog box display (GX/GP only)	[Off], [On] The alarm indicator is [Off].	-----	Specifies whether a channel information dialog box is displayed when the component is touched on the GX/GP recorder. On: Displayed Off: Not displayed

"-----" in the table indicates that the attribute is not available.

Example of Depend ID

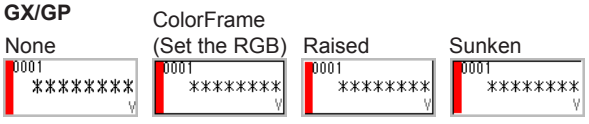
For example, if you have the following components whose IDs are 0 to 3 on the [Builder screen], the IDs you will be able to configure are shown in the below table.



ID	Configurable ID			
0	None	1	2	3
1	None	2	3	
2	None	3		
3	None	0	1	2

Example of Frames

GX/GP



DX

Channel settings and choices

GX10/GP10:

I/O channel-unit0	[0001] to [0016], [0101] to [0116], [0201] to [0216]
I/O channel-unit1	[1001] to [1016], [1101] to [1116], [1201] to [1216], [1301] to [1316], [1401] to [1416], [1501] to [1516]
I/O channel-unit2	[2001] to [2016], [2101] to [2116], [2201] to [2216], [2301] to [2316], [2401] to [2416], [2501] to [2516]
I/O channel-unit3	[3001] to [3016], [3101] to [3116], [3201] to [3216], [3301] to [3316], [3401] to [3416], [3501] to [3516]
I/O channel-unit4	[4001] to [4016], [4101] to [4116], [4201] to [4216], [4301] to [4316], [4401] to [4416], [4501] to [4516]
I/O channel-unit5	[5001] to [5016], [5101] to [5116], [5201] to [5216], [5301] to [5316], [5401] to [5416], [5501] to [5516]
I/O channel-unit6	[6001] to [6016], [6101] to [6116], [6201] to [6216], [6301] to [6316], [6401] to [6416], [6501] to [6516]
Math channel	[A001] to [A050]
Comm channel	[C001] to [C050]

For GX20/GP20:

I/O channel-unit0	[0001] to [0016], [0101] to [0116], [0201] to [0216], [0301] to [0316], [0401] to [0416], [0501] to [0516], [0601] to [0616], [0701] to [0716], [0801] to [0816], [0901] to [0916]
I/O channel-unit1	[1001] to [1016], [1101] to [1116], [1201] to [1216], [1301] to [1316], [1401] to [1416], [1501] to [1516]
I/O channel-unit2	[2001] to [2016], [2101] to [2116], [2201] to [2216], [2301] to [2316], [2401] to [2416], [2501] to [2516]
I/O channel-unit3	[3001] to [3016], [3101] to [3116], [3201] to [3216], [3301] to [3316], [3401] to [3416], [3501] to [3516]
I/O channel-unit4	[4001] to [4016], [4101] to [4116], [4201] to [4216], [4301] to [4316], [4401] to [4416], [4501] to [4516]
I/O channel-unit5	[5001] to [5016], [5101] to [5116], [5201] to [5216], [5301] to [5316], [5401] to [5416], [5501] to [5516]
I/O channel-unit6	[6001] to [6016], [6101] to [6116], [6201] to [6216], [6301] to [6316], [6401] to [6416], [6501] to [6516]
Math channel	[A001] to [A100]
Comm channel	[C001] to [C500]

For DX1000

Meas channel	[CH001] to [CH012]
Math channel	[CH101] to [CH124]

For DX2000

Meas channel	[CH001] to [CH048]
Math channel	[CH101] to [CH160]
Ext channel	[CH201] to [CH440]

Action settings (GX/GP)or Synchronize action (DX)

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Action attribute	[None], [Visible]	-----	This changes in sync with triggers (sync source).
Synchro attribute	-----	[None], [Visible], [2nd span]	None: No change (disables operation setting or synchronize action) Visible: Visible attributes operate. 2nd span is available for trend components and scale components only. Refer to “2nd span” on the next page.
Value (trig on)	[Off], [On]	-----	This is the attribute value when the synchronization switch is ON.
Value (switch On)	-----	[Off], [On]	
Trig	[Alarm], [Switch], [CompValue]	-----	This is the object to be synchronized with the component. Alarm: The attribute is synchronized with an alarm. Switch: The attribute is synchronized with a switch. CompValue: The attribute is synchronized to the compare value.
Synchro target	-----	[Alarm], [Switch]	
Action target no	When the trigger is [Alarm] or [CompValue]: GX10/GP10: I/O: [0001] to [6516] Math: [A001] to [A050] Comm.: [C001] to [C050] GX20-1: I/O: [0001] to [6516] Math: [A001] to [A100] Comm.: [C001] to [C300] GX20-2: I/O: [0001] to [6516] Math: [A001] to [A100] Comm.: [C001] to [C500] When the trigger is [Switch]: [1] to [100]	-----	This is the object for attribute synchronization. When the trigger or synchro target is [Alarm]: Channel No. to which the attribute is synchronized When the trigger or synchro target is [Switch]: Internal switch No. to which the attribute is synchronized If there is a settings file, the initial value displays the minimum existing channel number.
Channel or Switch no	-----	When the synchro target is [Alarm]: DX1000: [CH001] to [CH012], [CH101] to [CH124] DX2000: [CH001] to [CH048], [CH101] to [CH160], [CH201] to [CH440] When the synchro target is [Switch]: Internal switch No. [S1] to [S30]	
Alarm level	[1], [2], [3], [4], [All]		When the trigger or synchro target is [Alarm], the alarm level is specified. 1 to 4: Alarm level All: Synchronization to all alarm levels
Compare value	[-9.9999999E+29] to [-1.0000000E-30], 0, [1.0000000E-30] to [9.9999999E+29]	-----	Specify this attribute when the trigger is [CompValue]. Comparison target value Displayed in scientific notation with seven decimal places
Expression	[>], [>=], [=], [<=], [<], [<>]	-----	Specify this attribute when the trigger is [CompValue]. How channel values and Compare values are compared [>]: Trigger On when channel value > Compare value [>=]: Trigger On when channel value >= Compare value [=]: Trigger On when channel value = Compare value [<=]: Trigger On when channel value <= Compare value [<]: Trigger On when channel value < Compare value [<>]: Trigger On when channel value ≠ Compare value

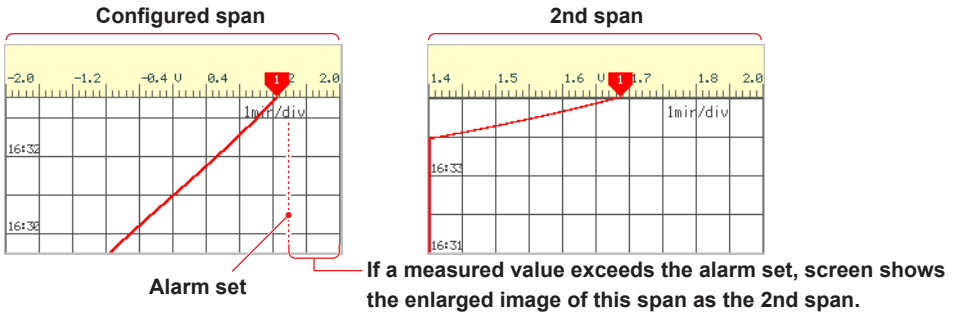
“-----” in the table indicates that the attribute is not available.

2nd span

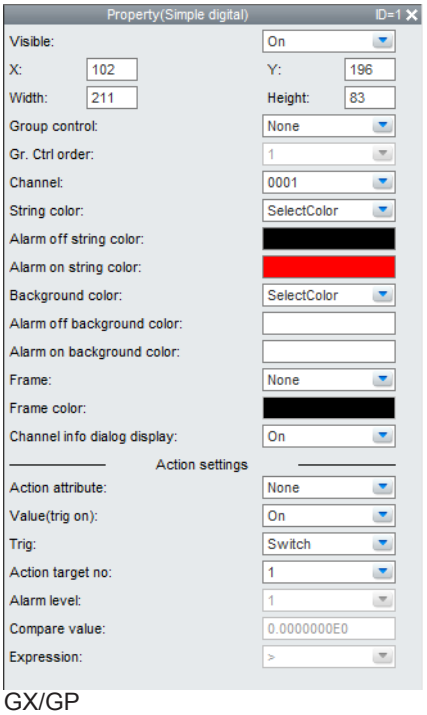
This is the attribute available with trend components and scale components only. You can enlarge the display of trend and scale by synchronizing the On/Off settings of alarm or internal switch. To validate the 2nd span, configure [2nd span] at the synchro attribute field. Scale and trend shown in the below figure are an example of displaying the 2nd span when the alarm is set to On.

(Example of settings)

- 2nd span: On; 2nd span Lower: 85.0%, 2nd span Upper: 100.0%
- Synchro attribute: 2nd span; Value (switch On): On; Synchro target: alarm, Channel no: 1; Alarm level: 1



3.4 Attributes of Simple Digital Components



GX/GP DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. Y = Min. Y*2 for Y < Min. Y*2 Y = (Min. Y*2 + Max. height*3 – Height) for (Y + Height) > (Min. Y*2 + Max. height*3)
	( ) = Status area set to No display		
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570)	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3
	( ) = Status area set to No display		

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

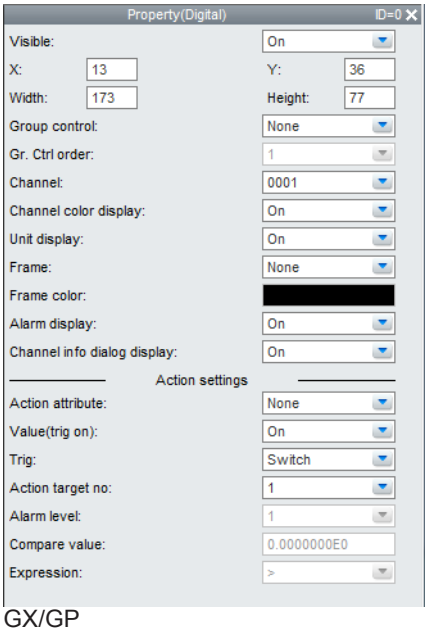
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16], [Font32]	This is the character size for the digital value of a component. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color	[CHANNEL], [SelectColor]	-----	Color of the digital value CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off (on) string color. BASE: Base color (background color of the screen)
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [CHANNEL]	
Alarm off string color:	RGB designation [0, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the font color when the alarm is off.
Alarm on string color:	RGB designation [255, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the display color for the digital value at the time of occurrence of an alarm.
Alarm color	-----	Color choice, [Alarm color]	This is the display color for the digital value at the time of occurrence of an alarm. Alarm color: This is the alarm display color set for each alarm level.
Background color	[CHANNEL], [SelectColor]	Same choice as for “Color” [BASE]	This is the background color of the digital value area. CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off (on) background color. BASE: Base color (background color of the screen)
Alarm off background color:	RGB designation [0, 0, 0]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color when the alarm is off.
Alarm on background color:	RGB designation [255, 0, 0]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color at the time of occurrence of an alarm.
BG transparent	-----	[Off], [On]	Select display/no display for transparent background. When this is On, the background color of the execution screen becomes transparent (on the execution screen of the DX recorder, frames are displayed by dotted lines to indicate that background transparent display is ON). BG transparent can be set to [On] only when a simple digital component is completely overlapped on top of a trend component. If it protrudes outside the trend component frame, [On] is disabled.

“-----” in the table indicates that the attribute is not available.

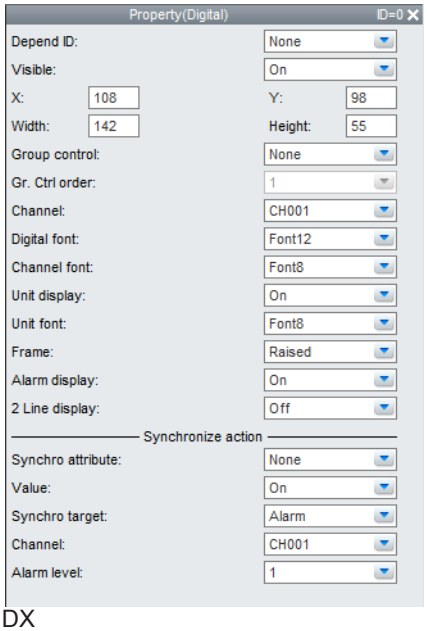
Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.5 Attributes of Digital Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. Y = Min. Y[*2] for Y < Min. Y[*2] Y = (Min. Y[*2] + Max. height[*3] – Height) for (Y + Height) > (Min. Y[*2] + Max. height[*3])
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width*[1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
Channel color display	[Off], [On]	-----	This selects whether to display channel display colors by specifying [On] or [Off].

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Digital font	-----	[Font5], [Font6], [Font8], [Font12], [Font16], [Font32]	This is the character size for the digital value of a component. The initial setting is [Font8] for DX1000 and [Font12] for DX2000.
Channel font	-----	TagNo./Channel : [Font5], [Font6], [Font8], [Font12], [Font16] TagNo.: [Font5], [Font12], [Font16]	This sets the character size for Tag No., Tag Comment, and Channel No. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Channel color display	[Off], [On]	-----	This selects whether to display channel display colors by specifying [On] or [Off].
Unit display	[Off], [On]	-----	This selects whether to display the component unit by specifying [On] or [Off].
Unit font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the character size for Unit display. Setting is not possible when “Unit display” is [Off]. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Alarm display	[Off], [On]		This selects display/no display for the alarm indicator. On the GX/GP, the alarm display marks correspond to level 1, level 2, level 3, and level 4, from the left. On the DX, they correspond to level 1, level 2, level 3, and level 4, from the top. On the DX, the marks are displayed in lime when the alarm is off. When the alarm is on, they are displayed with the specified colors (red, orange, yellow, or pink).
2 Line display	-----	[Off], [On]	This selects tag display with division into two lines or no division. Off: Display divided into two lines is not made. On: Display divided into two lines

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

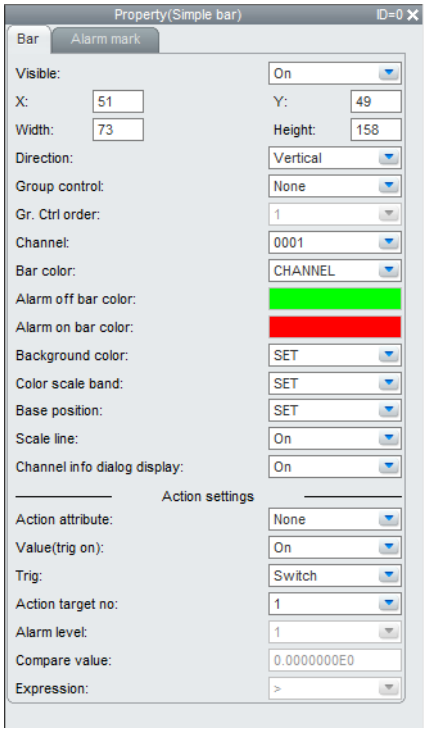
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

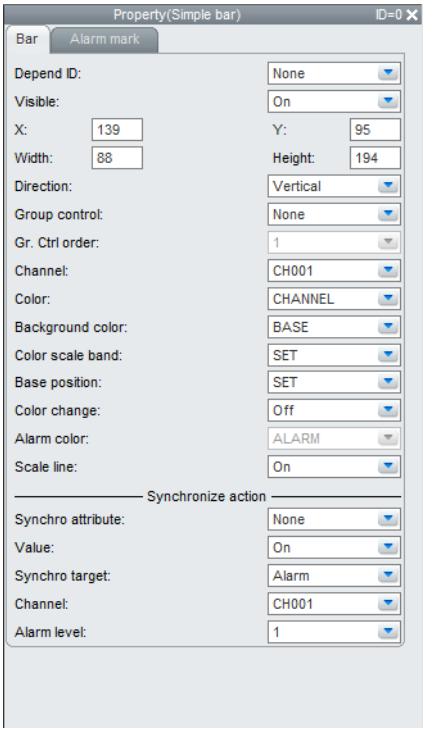
“-----” in the table indicates that the attribute is not available.

Synchronize action

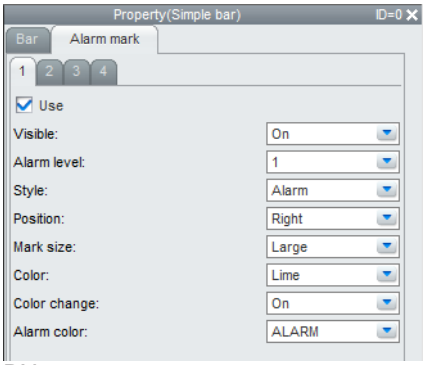
►Section 3.3

3.6 Attributes of Simple Bar Graph Components





GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Bar graph tab

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. Y = Min. Y[*2] for Y < Min. Y[*2] Y = (Min. Y[*2] + Max. height[*3] – Height) for (Y + Height) > (Min. Y[*2] + Max. height[*3])
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width*1 and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
Direction	[Horizon], [Vertical]		This is the bar graph display direction. The initial setting depends on the aspect ratio when the bar graph size has been decided. Height at the time of height ≥ Width Width at the time of height < Width
Bar color	[CHANNEL], [SelectColor]	-----	This is the bar color. BASE: Base color (background color of the screen) CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off (on) string color.
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [CHANNEL]	
Alarm off bar color	RGB designation [0, 0, 0]	-----	Specify this attribute when Bar color is [SelectColor]. This is the bar color when the alarm is off.
Alarm on bar color	RGB designation [255, 0, 0]	-----	Specify this attribute when Bar color is [SelectColor]. This is the bar color at the time of occurrence of an alarm.
Background color	[White], [Black], [SET]	Same choice as for “Color”, [None] [BASE]	This is the background color of the bar graph area SET: Setting of the GX/GP/DX recorder
Color scale band	[Off], [SET]		Selection of green band display/no display Off: No green band display SET: Setting of the GX/GP/DX recorder
Base position	[SET], [Center], [Lower], [Upper]	[SET], [Normal], [Center], [Lower], [Upper]	This is the base position of the bar graph. SET: Setting of the GX/GP/DX recorder
Color change	-----	[Off], [On]	When On, the bar color changes to the specified color when an alarm has occurred.
Alarm color	-----	Same choice as for “Color”, [ALARM]	This sets the bar color when an alarm has occurred.
Scale line	[Off], [On]		On: A scale line is displayed. Off: Only bar and background color are displayed.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

“-----” in the table indicates that the attribute is not available.

Alarm mark tab

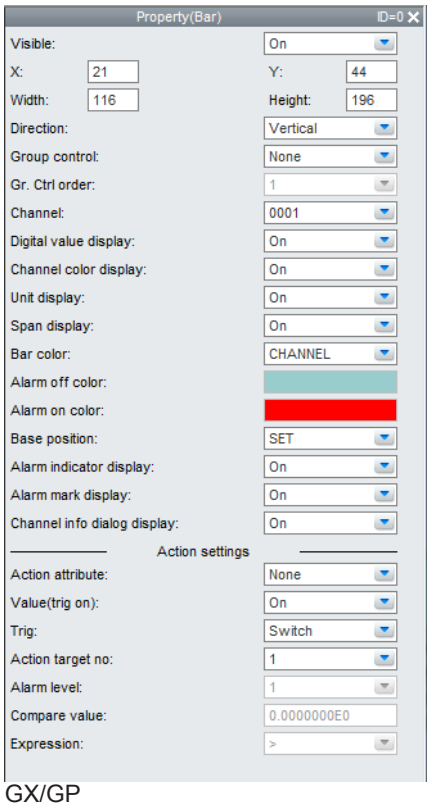
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Use	Checked, Not checked		Checked: Alarm marks are used. Not checked: Alarm marks are not used.
Alarm level	[1], [2], [3], [4]		1 to 4: Alarm level
Style	[Alarm], [Fixed], [SET]	[Alarm], [Fixed]	This is the alarm mark status. Alarm: Trapezoid Fixed: Triangle SET: Setting of the GX/GP recorder
Position	In case of a Vertical Bar Graph [Left], [Right] In case of a Horizontal Bar Graph [Over], [Under]		This set alarm mark setting at top, bottom, left or right of a bar graph. The choices change depending on the bar graph display direction. **In case of a Vertical Bar Graph** Left: Display on the left side of the bar graph Right: Display on the right side of the graph bar **In case of a Horizontal Bar Graph** Over: Display above the bar graph Under: Display below the bar graph
Mark size	[Large], [Small]		This is the alarm mark size. Large: Large mark Small: Small mark
Alarm off color	RGB designation [0, 255, 0]	-----	This is the mark color when the alarm is off.
Alarm on color	RGB designation [255, 0, 0]	-----	This is the mark color at the time of occurrence of an alarm.
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [CHANNEL]	This is the mark display color. CHANNEL: The color set to the specified channel
Color change	-----	[Off], [On]	Off: The color does not change at the time of alarm occurrence. On: The color of the alarm mark changes when an alarm occurs.
Alarm color	-----	Same choice as for “Color”, [ALARM]	This is the mark display color at the time of alarm occurrence. Setting is not possible when “Color change” is [Off]. Alarm color: This is the alarm display color set for each alarm level.

“-----” in the table indicates that the attribute is not available.

Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.7 Attributes of Bar Graph Components



GX/GP DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. Y = Min. Y*2 for Y < Min. Y*2 Y = (Min. Y*2 + Max. height*3 – Height) for (Y + Height) > (Min. Y*2 + Max. height*3)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

3.7 Attributes of Bar Graph Components

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
Direction	[Horizon], [Vertical]		This is the bar graph display direction. The initial setting depends on the aspect ratio when the bar graph size has been decided. Height at the time of height ≥ Width Width at the time of height < Width In case of a Horizontal Bar Graph, Tag No./Channel No., Tag, Unit, Digital value, and Alarm indicator are not displayed.
Channel font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of the component tag No./channel No. Setting is not possible when “Direction” is [Horizontal]. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Tag font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of component tags. Setting is not possible when “Direction” is [Horizontal]. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Digital value display	[Off], [On]	-----	This selects whether to display the digital value of components by specifying [On] or [Off].
Digital display	-----	[Off], [On]	This can be specified only when Direction is [Vertical].
Digital font	-----	[Font5], [Font6], [Font8], [Font12], [Font16], [Font32]	This is the font for display of component digital values. Setting is not possible when “Direction” is [Horizontal] or when “Digital value display” is [Off]. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Channel color display	Off], [On]	-----	This selects whether to display the channel color at the top of the component when Direction is [Vertical] by specifying [On] or [Off]. This can be specified only when [Direction] is [Vertical].
Unit display	[Off], [On]		Display/No display is selected for the component unit. This can be specified only when [Direction] is [Vertical].
Unit font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of component units. Setting is not possible when “Direction” is [Horizontal] or when Unit display is [Off].
Span display	[Off], [On]		This selects display/no display of the component span.
Span font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of component span values. Setting is not possible when “Span display” is [Off].
Bar color	[CHANNEL], [SelectColor]	[Green], [CHANNEL]	This is the color of the bar graph. Green: Display is made in the color set for each alarm level when an alarm has occurred (red, orange, yellow, pink). CHANNEL: The color set for the channel SelectColor: This is the color assigned to Alarm off (on) color.
Alarm off color	RGB designation [153, 204, 204]	-----	Specify this attribute when Bar color is [SelectColor]. This is the bar color when the alarm is off.
Alarm on color	RGB designation [255, 0, 0]	-----	Specify this attribute when Bar color is [SelectColor]. This is the bar color at the time of occurrence of an alarm.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

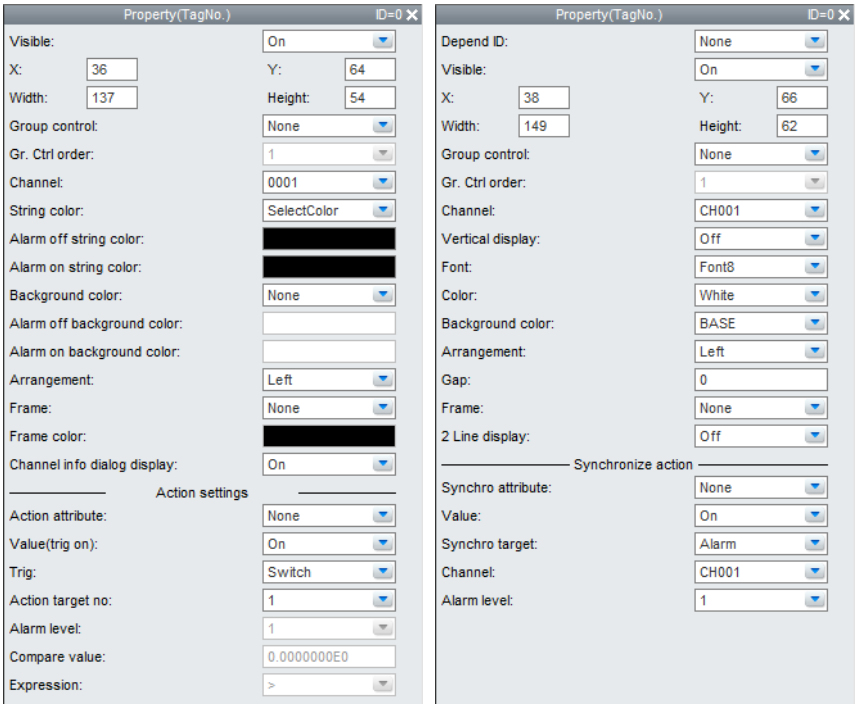
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Base position	[SET], [Center], [Lower], [Upper]	[SET], [Normal], [Center], [Lower], [Upper]	This is the bar graph display origin. SET: Setting of the GX/GP/DX recorder
Alarm indicator display	[Off], [On]	-----	This selects whether to display the alarm indicator by specifying [On] or [Off].
Alarm display	-----	[Off], [On]	This can be specified only when [Direction] is [Vertical].
Alarm mark display	[Off], [On]		This selects whether to display the alarm mark by specifying [On] or [Off].
2 Line display	-----	[Off], [On]	This selects tag display with division into two lines (On) or not (Off).

"-----" in the table indicates that the attribute is not available.

Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.8 Attributes of Tag No. Components



List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. Y = Min. Y[*2] for Y < Min. Y[*2] Y = (Min. Y[*2] + Max. height[*3] – Height) for (Y + Height) > (Min. Y[*2] + Max. height[*3])
	( ) = Status area set to No display		
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width[*1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570)	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
	( ) = Status area set to No display		

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Vertical display	-----	[Off], [On] (can only be set on the DXAdvanced R4.01/R4.11 screen)	Sets whether or not to display the tag number vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16], [Font32]	This is the character size for the Tag no. of a component. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color	[CHANNEL], [SelectColor]	-----	This is the text color. BASE: Base color (background color of the screen) CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off/on string color.
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [CHANNEL]	
Alarm off string color:	RGB designation [0, 0, 0]		Specify this attribute when Font is [SelectColor]. This is the font color when the alarm is off.
Alarm on string color:	RGB designation [0, 0, 0]		Specify this attribute when Font is [SelectColor]. This is the display color for the digital value at the time of occurrence of an alarm.
Background color	[None], [CHANNEL], [SelectColor]	Same choice as for “Color”, [None]	This is the background color of the tag number display area. The initial setting is [BASE].
Alarm off background color:	RGB designation [255, 255, 255]		Specify this attribute when Background color is [SelectColor]. This is the background color when the alarm is off.
Alarm on background color:	RGB designation [255, 255, 255]		Specify this attribute when Background color is [SelectColor]. This is the background color at the time of occurrence of an alarm.
Arrangement	[Left], [Center], [Right]		This is the text arrangement in direction of the X-axis in the tag number display area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.
Gap		[0] to [15]	The interval between characters is specified in dots.
2 Line display		[Off], [On]	This selects tag display with division into two lines (On) or not (Off).

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

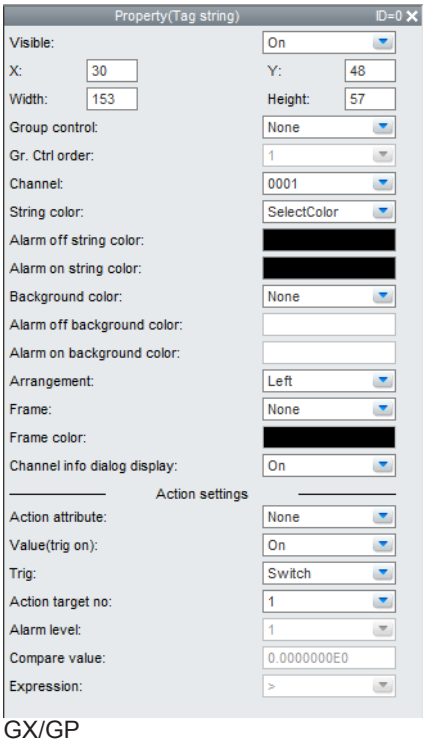
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

“-----” in the table indicates that the attribute is not available.

Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.9 Attributes of Tag String/Tag Comment Components



GX/GP DX

On the DX, the following limitations exist for setting of attributes of tag comment components.

- [Visible] can only be set when [Depend ID] is set to [None].

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the right side of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

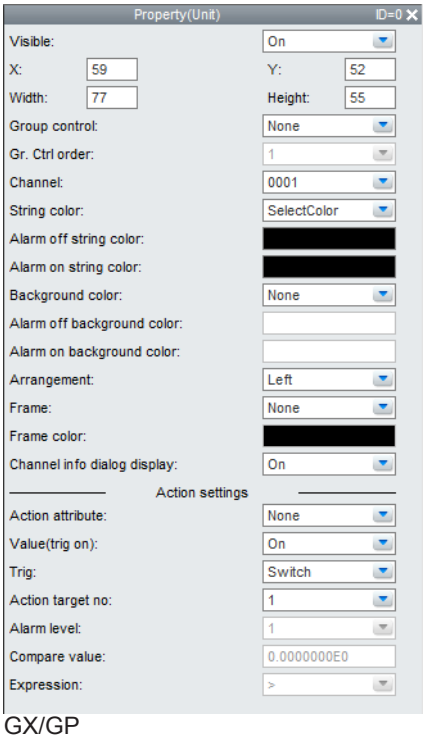
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570)	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
	( ) = Status area set to No display		
Vertical display	-----	[Off], [On] (can only be set on the DXAdvanced R4.01/R4.11 screen)	Sets whether or not to display the tag comment vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[[Font5], [Font6], [Font8], [Font12], [Font16]	This is the character size for the Tag no. of a component. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color	[CHANNEL], [SelectColor]	-----	This is the text color. BASE: Base color (background color of the screen) CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off/on string color.
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [CHANNEL]	
Alarm off string color:	RGB designation [0, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the font color when the alarm is off.
Alarm on string color:	RGB designation [0, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the font color for the digital value at the time of occurrence of an alarm.
Background color	[None], [CHANNEL], [SelectColor]	Same choice as for “Color”, [None] [BASE]	This is the background color of the tag comment display area. BASE: Base color (background color of the screen) CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off (on) background color. None: No painting of the background color
Alarm off background color:	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color when the alarm is off.
Alarm on background color:	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color at the time of occurrence of an alarm.
Arrangement	[Left], [Center], [Right]		This is the text arrangement in direction of the X-axis in the tag comment display area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.
Gap	-----	[0] to [15]	The interval between characters is specified in dots.
2 Line display	-----	[Off], [On]	This selects tag display with division into two lines (On) or not (Off).

“-----” in the table indicates that the attribute is not available.

Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.10 Attributes of Unit Components



GX/GP DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the right side of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

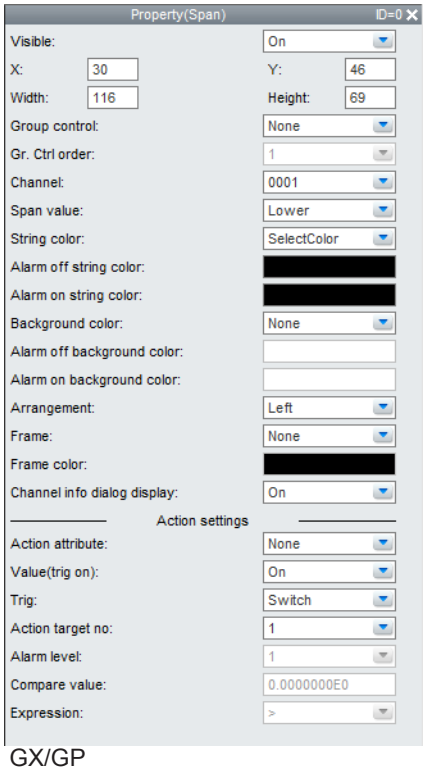
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Vertical display	-----	[Off], [On] (can only be set on the DXAdvanced R4.01/R4.11 screen)	Sets whether or not to display the units vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of unit components. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color	[CHANNEL], [SelectColor]	-----	The color for display of text. BASE: Base color (background color of the screen) CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off/on string color.
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [CHANNEL]	
Alarm off string color:	RGB designation [0, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the font color when the alarm is off.
Alarm on string color:	RGB designation [0, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the font color for the digital value at the time of occurrence of an alarm.
Background color	[None], [CHANNEL], [SelectColor]	Same choice as for “Color”, [None], [BASE]	This is the background color of the unit display area. CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off (on) background color. None: No background painting
Alarm off background color:	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color when the alarm is off.
Alarm on background color:	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color at the time of occurrence of an alarm.
Arrangement	[Left], [Center], [Right]	[Left], [Center], [Right]	This is the text arrangement in direction of the X-axis in the unit display area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.
Gap	-----	[0] to [15]	The interval between characters is specified in dots.

“-----” in the table indicates that the attribute is not available.

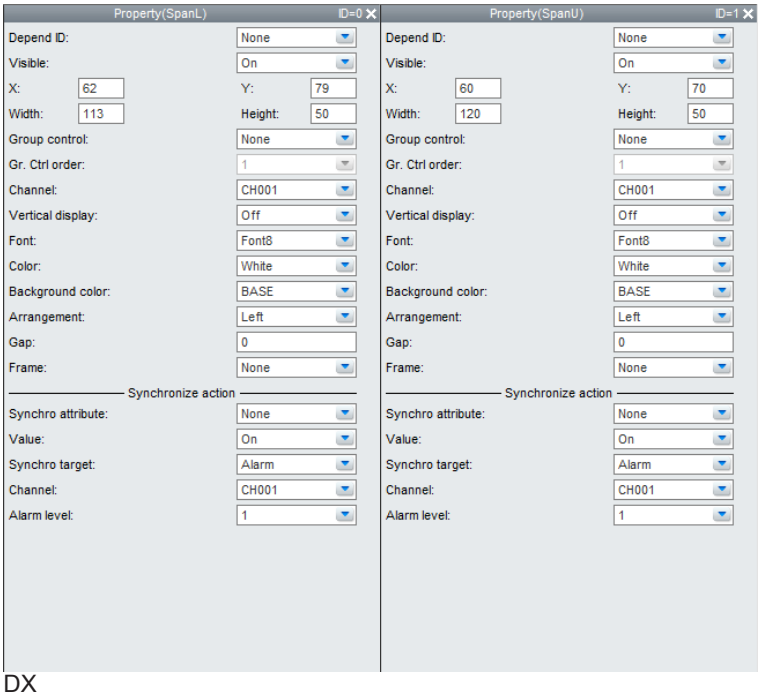
Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.11 Attributes of Span/Span Upper Limit/Span Lower Limit Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the right side of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

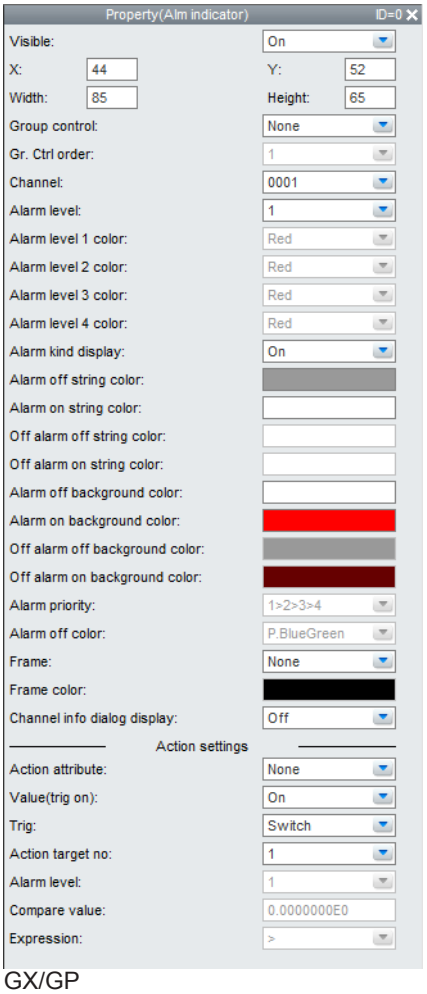
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Vertical display	-----	[Off], [On] (can only be set on the DXAdvanced R4.01/R4.11 screen)	Sets whether or not to display the span display vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of span upper limit components/span lower limit components. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color	[CHANNEL], [SelectColor]	-----	The color for display of text. BASE: Base color (background color of the screen) CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off/on string color.
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [CHANNEL]	
Alarm off string color	RGB designation [0, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the font color when the alarm is off.
Alarm on string color	RGB designation [0, 0, 0]	-----	Specify this attribute when Font is [SelectColor]. This is the font color for the digital value at the time of occurrence of an alarm.
Background color	[None], [CHANNEL], [SelectColor]	Same choice as for “Color”, [None]	This is the background color for the span display area. The initial setting is [BASE]. None: No background painting CHANNEL: The color set to the specified channel SelectColor: This is the color assigned to Alarm off (on) background color.
Alarm off background color	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color when the alarm is off.
Alarm on background color	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is [SelectColor]. This is the background color at the time of occurrence of an alarm.
Arrangement	[Left], [Center], [Right]		This is the text arrangement in direction of the X-axis in the span display area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.
Gap	-----	[0] to [15]	The interval between characters is specified in dots.

“-----” in the table indicates that the attribute is not available.

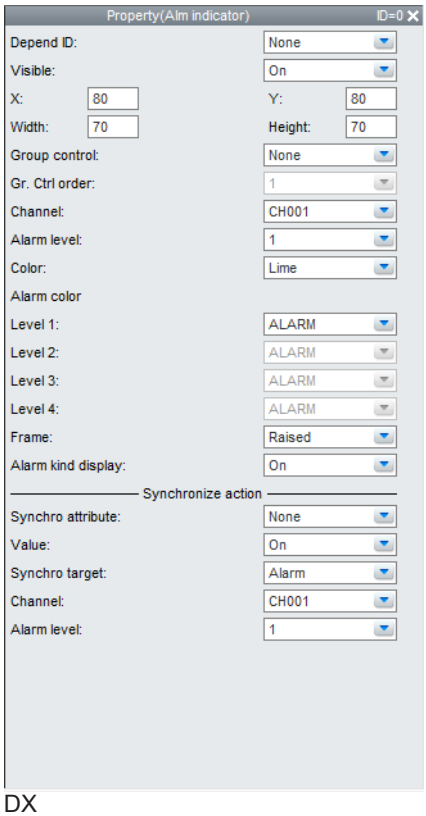
Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.12 Attributes of Alarm Indicator Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 639	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the right side of the component. When Y < min. Y[*2], Y = min. Y[*2] When (Y + size) > (min. Y[*2] + max. height[*3]), Y = (min. Y[*2] + max. height[*3])
	( ) = Status area set to No display		

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3
Alarm level	[1], [2], [3], [4], [All]		The assigned alarm level is set. All: This becomes ON when an alarm occurs for any one of Alarm level 1 to 4. Text indicating the alarm kind is not displayed. Text showing the alarm kind is not displayed when Channel alarm is OFF.
Color	-----	[Red], [Orange], [Lime], [Yellow], [Pink], [Black], [White]	This is the color for display when no alarm has occurred.
Alarm level 1 color	[Red], [Orange], [Yellow], [Pink]	-----	This is the character color for display at the time of occurrence of a level 1 alarm.
Level 1	-----	[Red], [Orange], [Lime], [Yellow], [Pink], [Black], [White], [ALARM]	On the GX, this can be specified when [Alarm level] is [All]. ALARM: This is the alarm display color set for each alarm level. The alarm levels are [1] and [All].
Alarm level 2 color	[Red], [Orange], [Yellow], [Pink]	-----	This is the character color for display at the time of occurrence of a level 2 alarm.
Level 2	-----	Same choice as for “level 1”	On the GX, this can be specified when [Alarm level] is [All]. ALARM: This is the alarm display color set for each alarm level. The alarm levels are [2] and [All].
Alarm level 3 color	[Red], [Orange], [Yellow], [Pink]	-----	This is the character color for display at the time of occurrence of a level 3 alarm.
Level 3	-----	Same choice as for “level 1”	On the GX, this can be specified when [Alarm level] is [All]. ALARM: This is the alarm display color set for each alarm level. The alarm levels are [3] and [All].
Alarm level 4 color	[Red], [Orange], [Yellow], [Pink]	-----	This is the character color for display at the time of occurrence of a level 4 alarm.
Level 4	-----	Same choice as for “level 1”	On the GX, this can be specified when [Alarm level] is [All]. ALARM: This is the alarm display color set for each alarm level. The alarm levels are [4] and [All].
Alarm kind display	[Off], [On]		This selects display (On) / no display (Off) of strings that indicate alarm kind.
Alarm off string color	RGB designation [153, 153, 153]	-----	This is the displayed character color when the alarm is off. This setting is invalid when Alarm kind display is [Off] or Alarm level is [All].
Alarm on string color	RGB designation [255, 255, 255]	-----	This is the displayed character color when the alarm is on. This setting is invalid when Alarm kind display is [Off] or Alarm level is [All].
Off alarm off string color	RGB designation [255, 255, 255]	-----	Off alarm off string color This setting is invalid when Alarm kind display is [Off], Alarm level is [All], or alarm display is nonhold in the settings file.
Off alarm on string color	RGB designation [255, 255, 255]	-----	On alarm off string color This setting is invalid when Alarm kind display is [Off], Alarm level is [All], or alarm display is nonhold in the settings file.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

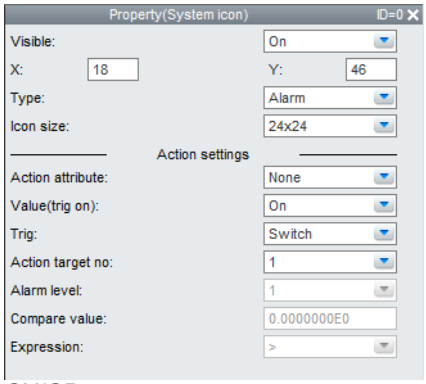
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Alarm off background color	RGB designation [255, 255, 255]	-----	This is the displayed background color when the alarm is off. This setting is invalid when Alarm level is [All].
Alarm on background color	RGB designation [255, 0, 0]	-----	This is the displayed background color when the alarm is on. This setting is invalid when Alarm level is [All].
Off alarm off background color	RGB designation [153, 153, 153]	-----	This is the background color when the alarm is off and the indicator is off. This setting is invalid when Alarm level is [All] or alarm display is nonhold in the settings file.
Off alarm on background color	RGB designation [102, 0, 0]	-----	This is the background color when the alarm is on and the indicator is off. This setting is invalid when Alarm level is [All] or alarm display is nonhold in the settings file.
Alarm priority	[1>2>3>4], [1>4>2>3], [1>4>3>2]	-----	This is the alarm level priority. 1>2>3>4: Alarm levels on the left are higher priority. 1>4>2>3: Alarm levels on the left are higher priority. 1>4>3>2: Alarm levels on the left are higher priority. This setting is valid only when Alarm level is [All].
Alarm off color	[White], [Black], [P.BlueGreen]	-----	This is the background color when the alarm is off. White: Displayed at RGB (255, 255, 255). Black: Displayed at RGB (0, 0, 0). P.BlueGreen: Displayed at RGB (153, 204, 204). This setting is valid only when Alarm level is [All].

"-----" in the table indicates that the attribute is not available.

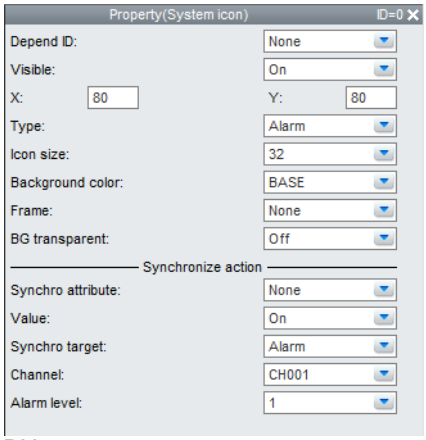
Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.13 System Icon Component Attribute



GX/GP



DX

This cannot be set on DXAdvanced R3.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. When X < 0, X = 0 When (X + size) > max. width*1, X = (max. width - size)
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the right side of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Type	[Mem.smpl.], [Alarm], [SDCard], [Math], [OpeLock], [Email], [Instinfo], [UserLock]	[Memory sample], [Alarm], [CF card], [Math], [Key lock], [Email], [Status], [Key & email], [UserLock], [User & status]	Selects the kind of system icon to display.
Size	[20×20], [24×24]	[24], [32]	This selects the size of the displayed icon.
Background color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	This is the color that fills the background of the component.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

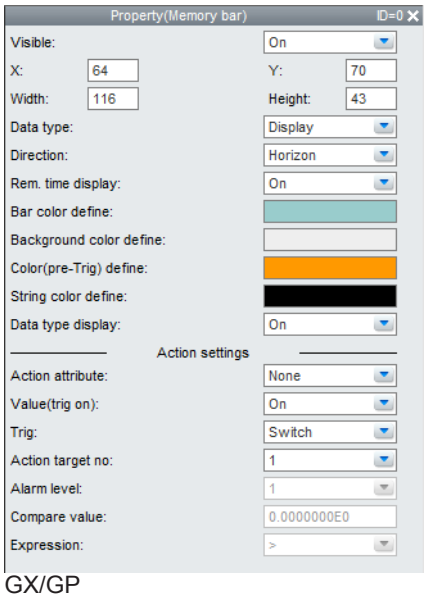
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
BG transparent	-----	[Off], [On]	On: The background of the DX recorder execution panel is transparent The software screen construction area shows the frame as a dotted line, and indicates that the background transparency is On. **Note: The background transparency is valid when a trend display component exists under the system icon component that completely overlaps with it. The transparency is invalid if the system icon component protrudes from the trend component.**

"-----" in the table indicates that the attribute is not available.

Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.14 Attribute of Memory Bar Components



GX/GP DX

This cannot be set on DXAdvanced R3.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. When X < 0, X = 0 When (X + size) > max. width*1, X = (max. width - size)
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the right side of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3, Y = min. Y*2

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

3.14 Attribute of Memory Bar Components

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Batch group number	-----	Setting range: 1 to multi-batch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group no. which can be selected within the range of the multi-batch number set by the basic settings of the DX recorder. This item is not displayed when multi-batch is Off. This cannot be specified if the batch function is set to Off or On in the settings file. The maximum value of the setting range is the number of multi batches set in the settings file.
Data type	[Display], [event]		Select the type of data to display in the Memory bar. On the DX, when the data type specified here is sent to the DX recorder, it automatically changes to a valid setting on the DX recorder. For example, even if you set the Memory bar data type to [Display] and send it to the DX recorder, if the DX recorder's memory type in Basic setting mode is Event, the data type from the memory sample bar is changed to [Event].
Direction	[Vertical], [Horizontal]		Sets the direction of bar graphs. The default value differs depending on the vertical-to-horizontal size ratio of the plotted component. If the component is taller than it is wide, the direction is [Vertical] If the component is wider than it is tall, the direction is [Horizontal] Vertical: The bar expands vertically from bottom to top. Horizontal: The bar expands horizontally from left to right.
Rem. time display	[Off], [On]	[Off], [On]	Sets whether or not to display the remaining sampling time in the Memory bar. On: Displayed Off: Not displayed
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the display font for the text label that shows the remaining time and event data status. This can be set only when [Rem. time display] is [On].
Bar color define	RGB designation [153, 204, 204]	-----	This is the color for displaying the bar graph.
Color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	The color of the bar graph. Background color: Base color (base color of the screen)
Background color define	RGB designation [238, 238, 238]	-----	This is the color of the fill for the background.
Background color	-----	Same choices as for [Color] [Background color]	

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

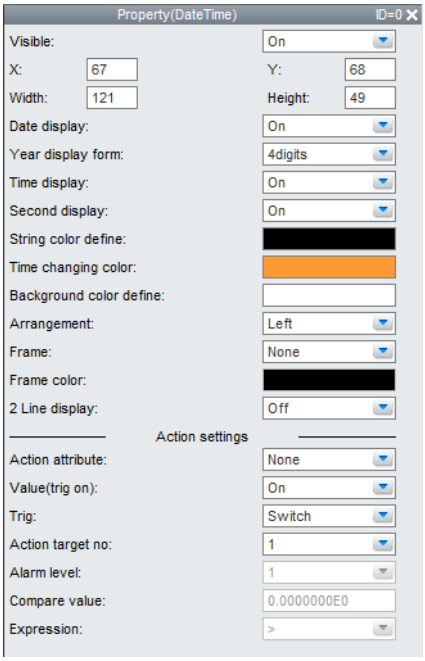
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Color (pre-Trig) define	RGB designation [153, 204, 204]	-----	This is the color of the bar during a trigger wait. This can be set only when [Data type] is [Event].
Color(pre-Trig)	-----	Same choices as for [Color] [Orange]	
String color define	RGB designation [0, 0, 0]	-----	This is the display color for the text label that shows the remaining time and event data status. This can be set only when [Rem. time display] is [On].
String color	-----	Same choices as for [Color] [Black]	
Data type display	[Off], [On]	-----	This selects whether to display data type string.

"-----" in the table indicates that the attribute is not available.

Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.15 Attributes of DateTime Component / Time Label Component



GX/GP DX

This cannot be set on DXAdvanced R3.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Date display	[Off], [On]	-----	This selects whether to display the date. Off: The date is not displayed. On: The date is displayed.
NoDate display	-----	[Off], [On]	This selects whether to display the date. Off: The date is displayed. On: The date is not displayed.
Year display form	[None], [4digits], [2digits]		Selects the number of digits for the year. None: The year is not displayed 4digits: The year is displayed in yyyy format 2digits: The year is displayed in yy format This can be set only when [Date display] is [On] or [NoDate display] is [Off].
Time display	[Off], [On]		Select Display/No display for the time. Off: The time is not displayed On: The time is displayed
Second display	[Off], [On]		Selects Display/No display for the seconds. Off: The seconds are not displayed On: The seconds are displayed This can be set only when [Date display] is [On].
Vertical display	-----	[Off], [On]	Sets whether or not to display the date time label display vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for displaying the time. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color define	RGB designation [0, 0, 0]	-----	This is the character color for displaying the time.
Color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	The display color of the time. Background color: Base color (base color of the screen)
Time changing color	RGB designation [255, 153, 51]	-----	This is the character color when the time is being changed.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

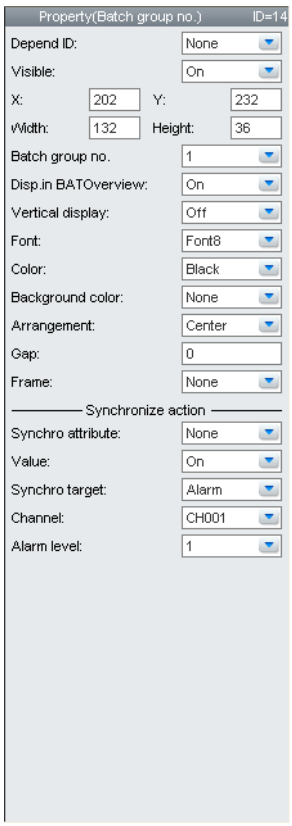
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Background color define	RGB designation [255, 255, 255]	-----	This is the color of the fill for the label area.
Background color	-----	Same choice as for [Color] The default setting is [Background color].	
Arrangement	[Left], [Center], [Right]		This is the arrangement along the X axis within the label area. The Y-axis direction always is arranged at the center. Left: Text label is left justified Center: Text label is centered Right: Text label is right justified
Gap	-----	[0] to [15]	Specifies a distance between characters in dots.
BG transparent	-----	[Off], [On]	On: The background in the DX recorder execution panel is transparent. The software screen construction area shows the frame as a dotted line, and indicates that the background transparency is On. **Note: The background transparency is valid when a trend display component exists under the Time label component that completely overlaps with it. The transparency is invalid if the time label component protrudes from the trend display component.**
2 Line display	[Off], [On]		On: The date and time are displayed in 2 lines in the GX/GP/DX recorder execution panel. The date and time are displayed in 2 lines, respectively. Off: 2-line display not used. On the GX/GP, 2 Line display can be specified when [Date display] and [Time display] are [On]. On the DX, 2 Line display can be specified when [NoDate display] if [Off] and [Time display] is [On].

"-----" in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.16 Attributes of Batch Group Number Components



- If the Batch function is Off or On in the settings file, a batch group number component cannot be created. For existing batch group number components, no attributes other than X, Y, Width, and Height can be set.
- This component can only be set on the DXAdvanced R4.01 or R4.11 screen.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
X	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	DX1000: 24(0) to 238 DX2000: 40(0) to 478 ( ) = Status area set to No display	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1

*1 DX1000 max. width = 320, DX2000 max. width = 640

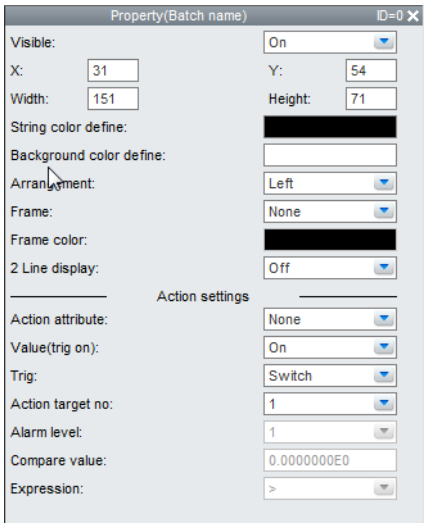
*2 DX1000 min. Y = 24(0), DX2000 min. Y = 40(0), ( ) = Status area set to No display

*3 DX1000 max. height = 216(240), DX2000 max. height = 440(480), ( ) = Status area set to No display

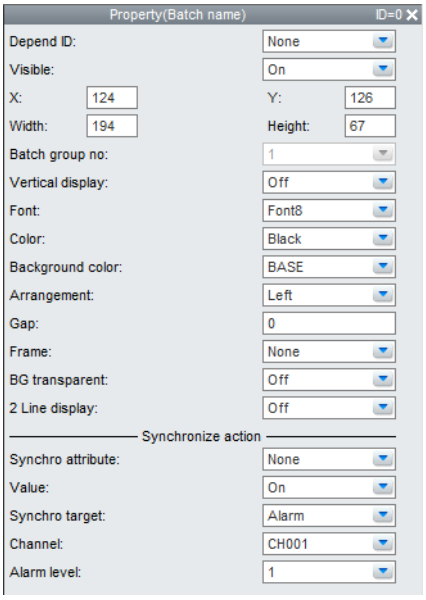
Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
Height	DX1000: 2 to 216(240) DX2000: 2 to 440(480) ( ) = Status area set to No display	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
Batch group number	Setting range: 1 to multibatch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group no. which can be selected within the range of the multi-batch number set by the basic settings of the DX recorder. • The MultiBatch number specified in the settings file is the maximum value for [Batch group no.].
Disp.in BATOverview	[Off], [On]	Turns the display On/Off for when a screen being displayed is in Common mode. On: Number indicated by the batch group number is displayed Off: Not displayed
Vertical display	[Off], [On]	Sets whether or not to display the batch group number vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for displaying the batch group number. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Color	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	The color of the text label. Background color: Base color (background color of the screen)
Background color	Same choices as for [Color], and [None]	This is the color of the background. None: No background fill color
Arrangement	[Left], [Center], [Right]	This is the arrangement along the X axis within the label area. The Y-axis direction always is arranged at the center. Left: Text label is left justified Center: Text label is centered Right: Text label is right justified
Gap	[0] to [15]	Specifies a distance between characters in dots.

Synchronize action
►Section 3.3

3.17 Attributes of Batch Name Components



GX/GP



DX

- When the Batch function is Off in the settings file, no attributes other than X, Y, Width, and Height can be set.
- This cannot be set on DXAdvanced R3.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Batch group number	-----	Setting range: 1 to multibatch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group no. which can be selected within the range of the multi-batch number set by the basic settings of the DX recorder. • If the Batch function is On in the settings file, [Batch group no.] cannot be set. • The MultiBatch number specified in the settings file is the maximum value for [Batch group no.].
Vertical display	-----	[Off], [On]	Sets whether or not to display the batch name vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for displaying the batch group number. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color define	RGB designation [0, 0, 0]	-----	The color of the text label.
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	The color of the text label. Background color: Base color (background color of the screen)
Background color define	RGB designation [255, 255, 255]	-----	This is the batch name background color.
Background color	-----	Same choice as for [Color] The default setting is [Background color].	

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

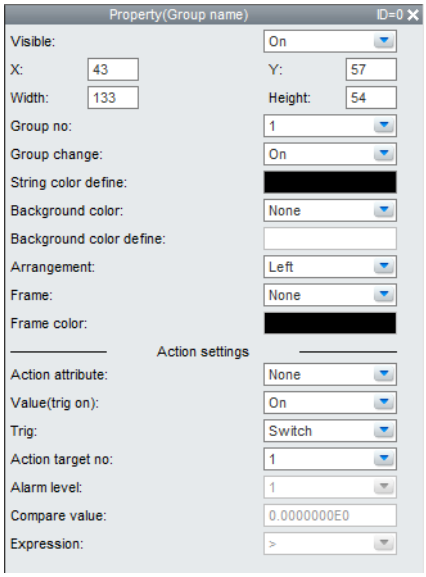
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Arrangement	[Left], [Center], [Right]		This is the arrangement of the text label along the X axis of the batch name. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.
Gap	-----	[0] to [15]	Specifies a distance between characters in dots.
BG transparent (Can only be set with a DXAdvanced R4.11 screen)	-----	[Off], [On]	On: The background in the DX recorder execution panel is transparent. The software screen construction area shows the frame as a dotted line, and indicates that the background transparency is On. **Note: The background transparency is valid when a trend display component exists under the batch name component that completely overlaps with it. The transparency is invalid if the batch name component protrudes from the trend component.**
2 Line display	[Off], [On]		On: Batch name displayed in 2 lines in the GX/GP/DX recorder execution panel. Off: Batch name not displayed in 2 lines in the GX/GP/DX recorder execution panel.

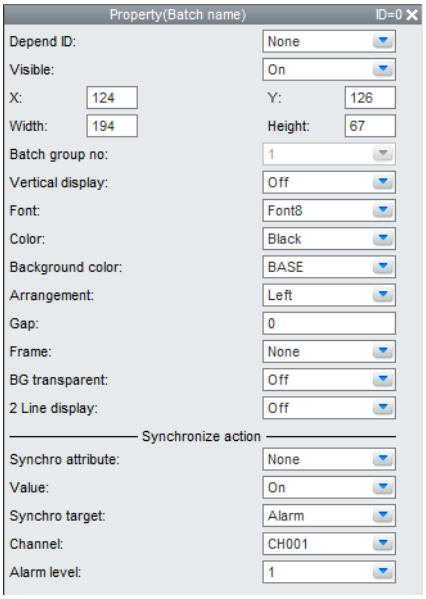
"-----" in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.18 Attributes of Group Name Components



GX/GP



DX

- If there is no settings file, or if the Batch function is Off or On, the displayed text label is [GROUP] + number.
- If there is no settings file, or if the Batch function is MultiBatch, the displayed text label is [BATCH] + batch number + [-] + group number (DX only).
- This cannot be set on DXAdvanced R3.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
	( ) = Status area set to No display		
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570)	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3
	( ) = Status area set to No display		
Batch group number	-----	Setting range: 1 to multibatch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group no. which can be selected within the range of the multi-batch number set by the basic settings of the DX recorder. • If the Batch function is Off or On in the settings file, [Batch group no.] cannot be set. • The MultiBatch number specified in the settings file is the maximum value for [Batch group no.].
Group no	GX10: [1] to [30] GX20-1: [1] to [50] GX20-2: [1] to [60]	-----	Sets the display group number.
Display Grp no	-----	When the Batch function is Off or On DX1000: [1] to [10] DX2000: [1] to [36] When the Batch function is MultiBatch DX1000: [1] to [6] DX2000: [1] to [12]	Sets the display group number. Display on the builder screen of the DX recorder is made as “Group No.”.
Group change	[Off], [On]	-----	Sets whether or not to switch display groups. Off: Display groups not switched On: Display groups switched
Display group switching (“Group switching” on the DX recorder builder screen)	-----	[Off], [On]	
Vertical display	-----	[Off], [On]	Sets whether or not to display the batch group name vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for displaying the batch group number. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color define	RGB designation [0, 0, 0]	-----	The color of the text label.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

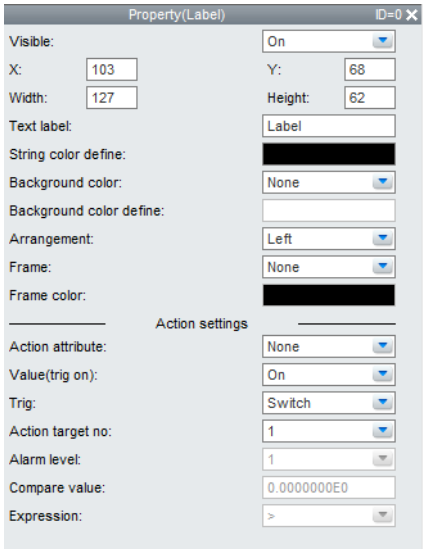
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	The color of the text label. BASE: Base color (background color of the screen)
Background color	[None], [SelectColor]	Same choices as for [Color], and [None]	This is the color of the component area. None: No background fill color
Background color define	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is [SelectColor].
Arrangement	[Left], [Center], [Right]		This is the arrangement along the X axis within the label area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.
Gap	-----	[0] to [15]	Specifies a distance between characters in dots.
2 Line display	-----	[Off], [On]	On: Group name displayed in 2 lines in the DX recorder execution panel. Off: Group name not displayed in 2 lines in the DX recorder execution panel.

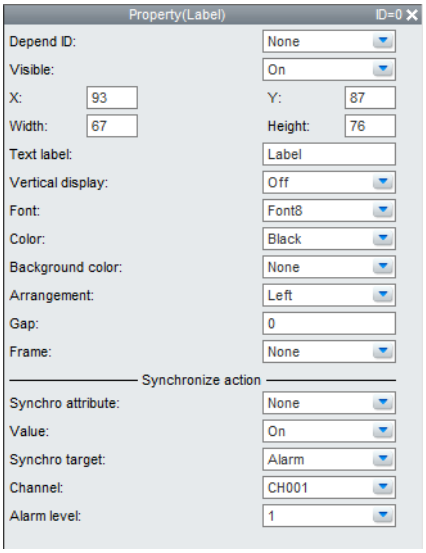
"-----" in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.19 Attributes of Label Components



GX/GP



DX

- You can double-click a component to directly input a text label on the component. After input, press the Return key or click the mouse anywhere outside the component to finalize the entry.
- If the font is taller than the component, the text label input area becomes as tall as the font.
- If the 64-character limit is exceeded, the characters over the limit are deleted.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
	( ) = Status area set to No display		
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

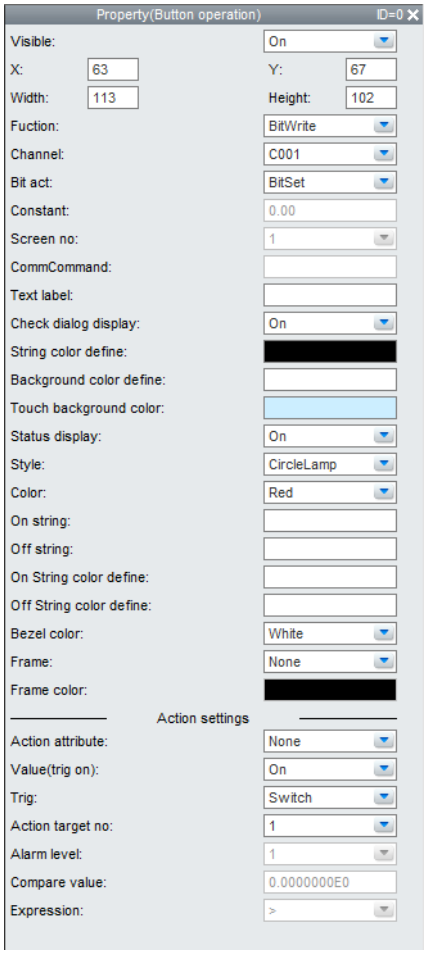
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
Text Labels	"Label"		The text label displayed on screen. GX/GP: Up to 64 characters can be displayed. DX: Up to 64 characters (or 32 double-byte characters) can be displayed.
Vertical display (Can only be set with a DXAdvanced R4.01 or R4.11 screen)	-----	[Off], [On]	Sets whether or not to display the label display vertically. [On]: Rotates the text label 90 degrees clockwise. [Off]: Displays the text label horizontally.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16], [Font32]	This is the font for display of component text strings. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color define	RGB designation [0, 0, 0]	-----	This is the text color.
Color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	This is the text color. Background color: Base color (background color of the screen)
Background color	[None], [SelectColor]	Same choices as for [Color], and [None]	This is the color of the background of the label area. None: No background fill color
Background color define	RGB designation [255, 255, 255]	-----	Sets the color of the background of the label area.
Arrangement	[Left], [Center], [Right]		This is an arrangement kind for text strings in horizontal direction in the label display area. It is always centered along the Y-axis. Left: Text label is left justified Center: Text label is centered Right: Text label is right justified
Gap	-----	[0] to [15]	Specifies a distance between characters in dots.

"-----" in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.20 Attributes of Button Operation Components/ Push Button Components



GX/GP DX

You can double-click a component to directly input a text label on the component. After input, press the Return key or click the mouse anywhere outside the component to finalize the entry. If the font is taller than the component, the text label input area becomes as tall as the font.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y*2 + Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > (Min. Y*2 + Max. height*3) Height = Max. height*3, Y = Min. Y*2 for height ≥ Max. height*3
Function	[BitWrite], [FixNoWrite], [DisplayChange], [CommCommand]	-----	This is the button operation function. [BitWrite]: Bit writing is executed. [FixNoWrite]: Constant writing is executed. [DisplayChange]: Display change is executed. [CommCommand]: Communication command is executed. If the GX/GP recorder has a communication function, the default setting is BitWrite. If it doesn't, the default setting is DisplayChange. If the GX/GP recorder has a communication function, [BitWrite] and [FixNoWrite] are displayed.
Channel	GX10: [C001] to [C050] GX20-1: [C001] to [C300] GX20-2: [C001] to [C500]	-----	This is the communication channel number. This can be set when Function is [BitWrite] or [FixNoWrite].
Bit act	[BitSet], [BitReset], [BitReverse]	-----	This is the operation for when Function is BitWrite. This can be set when Function is [BitWrite]. [BitSet]: The value is set to 1. [BitReset]: The value is set 0. [BitReverse]: The value is reversed.
Constant	[0] [-9999999] to [99999999]	-----	This can be set when Function is [FixNoWrite]. The setting range is [-9999999] to [99999999] plus the decimal place assigned to the channel. (Example: if the decimal place is 2, -99999.99 to 999999.99)
Screen no	[1] to [30]	-----	This can be set when Function is [DisplayChange]. This sets the display number of the custom display.
CommCommand		-----	This can be set when Function is [CommCommand]. This sets the communication command to execute using a character string. The default value is blank.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

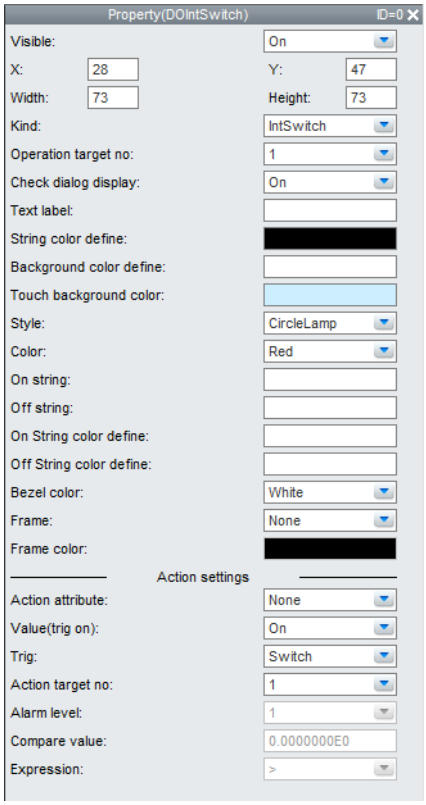
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Text Label		"PushButton"	This sets the character string to display on the button. GX/GP: Up to 16 characters can be displayed. The default value is blank. DX: Up to 64 (32 double-byte) characters can be entered. Characters exceeding the maximum number are cut.
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of text strings. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Event edge switch	-----	[1] to [30]	—
Action prompt	[Off], [On]		This selects use/no use of dialog boxes confirming execution of an action function. Off: Dialog boxes are not used On: Dialog boxes are used
Arrangement	-----	[Left], [Center], [Right]	This is the text arrangement in direction of the X-axis. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.
String color define	RGB designation [0, 0, 0]	-----	This is the text display color.
Color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	This is the text display color. BASE: Base color (background color of the screen)
Background color define	RGB designation [255, 255, 255]	-----	This is the background color of the push button.
Background color	-----	Same choice as for “Color”, [BASE]	This is the background color of the push button.
Touch background color	RGB designation [255, 255, 255]	-----	This is the background color for when the button is touched.
Status indication	[Off], [On]	-----	This selects whether to display the rectangular or circular lamp by specifying [On] or [Off]. This can be set when Function is [BitWrite] or [FixNoWrite].
Style	[RectLamp], [CircleLamp]	-----	This is the shape of the status display. This can be set when [Status display] is [On]. RectLamp: The status is displayed with a rectangular lamp. CircleLamp: The status is displayed with a circular lamp.
Color	[Red], [Green], [Yellow], [Orange], [Blue], [White]	-----	This is the status display color.
On string		-----	This is the displayed character string when Status display is On. Up to eight characters can be entered. The default value is blank.
Off string		-----	This is the displayed character string when Status display is Off. Up to eight characters can be entered. The default value is blank.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
On String color define	RGB designation [255, 255, 255]	-----	This is the displayed character color when Status display is On.
Off String color define	RGB designation [255, 255, 255]	-----	This is the displayed character color when Status display is Off.
Bezel color		-----	This is the bezel color. This is the displayed when Status display is On.

"-----" in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.21 Attributes of DOIntSwitch Components / Switch Components



GX/GP DX

- On the GX, [Text label] and [Off string] can be entered directly. [On string] is set with the attribute.
- On the DX, only when [String display] is [On], you can directly input an On or Off text label.
  You can change the On and Off text label within the screen construction area of switches whose [Style] is [Selector], [Seesaw], [Lever], [Toggle], [SlideX], or [SlideY]. For switches whose [Style] is [Connector], [Push], or [Power], you can change the Off text label in the screen construction area. The procedure for entering a text label directly is to double-click the text label in the component. After input, press the Return key or click the mouse anywhere outside the component to finalize the entry. If the font is taller than the component, the text label input area becomes as tall as the font.

3.21 Attributes of DOIntSwitch Components / Switch Components

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y[*2], Y = min. Y[*2] When (Y + size) > (min. Y[*2] + max. height[*3]), Y = (min. Y[*2] + max. height[*3] - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width[*1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > Max. height[*3] Height = Max. height[*3], Y = 0 for height ≥ Max. height[*3]
Style	-----	[Selector], [Seesaw], [Lever], [SlideX], [SlideY], [Push], [Power], [Connector], [Toggle]	This is the switch display kind.
Event level switch	-----	[1] to [30]	—
Kind	[DO], [IntSwitch]	-----	This selects the type of the target channel or switch. DO: DO channel IntSwitch: Internal switch
Operation target no	DO: [0001] to [6516] Switch: [1] to [100]	-----	This selects the target channel or switch number.
Action prompt	[Off], [On]		This selects use/no use of dialog boxes confirming execution of an action function. Off: Dialog boxes are not used On: Dialog boxes are used
Text Labels		-----	This is the displayed text. The default value is blank. Up to 16 characters can be entered.
String color define	RGB designation [0, 0, 0]	-----	This is the text color.
Background color define	RGB designation [255, 255, 255]	-----	This is the background color.
Touch background color	RGB designation [204, 238, 255]	-----	This is the displayed background color when the switch is touched.
Style	[RectLamp], [CircleLamp]		This is the switch display kind. RectLamp: The status is displayed with a rectangular lamp. CircleLamp: The status is displayed with a circular lamp.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

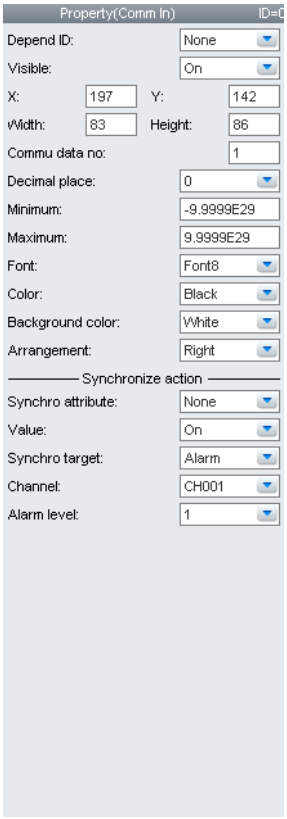
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Color	[Red], [Green], [Yellow], [Orange], [Blue], [White]	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	This is the switch color. BASE: Base color (background color of the screen)
On color	-----	Same choice as for “Color”, [Cyan]	This is the color when the switch is ON. The color at the time of ON is not displayed on the builder screen of the DX recorder.
Off color	-----	Same choice as for [Color]	This is the color when the switch is OFF. The initial setting is [BASE].
String display	-----	[Off], [On]	ON: Display of On Text and Off Text Off: No display of On Text and Off Text
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the size of On/Off text. The initial setting is [Font6] for DX1000 and [Font8] for DX2000. This can be set only when [String display] is [On].
Gap	-----	[0] to [15]	Specifies a distance between characters in dots. This can be set only when [String display] is [On].
On string		"ON"	This is text showing ON. GX/GP: Up to 8 characters can be displayed. The default value is blank. DX: Input of max. 8 single-byte characters is possible. ON Text is not displayed on the execution screen of the DX recorder when “Style” is [Push], [Power], or [Connector]. This can be set only when [String display] is [On].
Off string		"OFF"	This is text showing OFF. GX/GP: Up to 8 characters can be displayed. The default value is blank. DX: Input of max. 8 single-byte characters is possible. This can be set only when [String display] is [On].
On String color define	RGB designation [255, 255, 255]	-----	This is the On string color.
Off String color define	RGB designation [255, 255, 255]	-----	This is the Off string color.
Bezel color	[White], [Black]	-----	This is the bezel color.

“-----” in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.22 Attributes of Communication Input Components



- This component can be set only on the DX.
- The displayed width of the component frame is 1 dot for the DX1000 and 2 dots for the DX2000.
- Switching the max. value and the min. value is not possible.
- If a value smaller than [Minimum] is input for [Maximum], [Minimum] becomes that value.
- If a value larger than [Maximum] is input for [Minimum], [Maximum] becomes that value.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
X	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	DX1000: 24(0) to 238 DX2000: 40(0) to 478 ( ) = Status area set to No display	This is the Y-coordinate of the top of the component. When Y < min. Y[*2], Y = min. Y[*2] When (Y + size) > (min. Y[*2] + max. height[*3]), Y = (min. Y[*2] + max. height[*3] - size)

*1 DX1000 max. width = 320, DX2000 max. width = 640

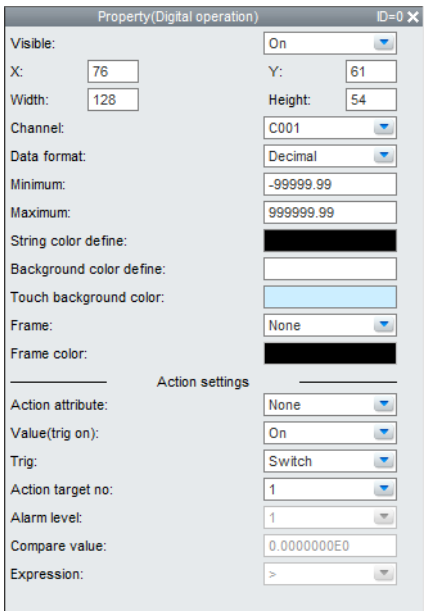
*2 DX1000 min. Y = 24(0), DX2000 min. Y = 40(0), ( ) = Status area set to No display

*3 DX1000 max. height = 216(240), DX2000 max. height = 440(480), ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
Width	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width[*1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	DX1000: 2 to 216(240) DX2000: 2 to 440(480) ( ) = Status area set to No display	This is the component height. Height = 2 for height < 2 Y = (Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > Max. height[*3] Height = Max. height[*3], Y = 0 for height ≥ Max. height[*3]
Commu data no	DX1000: [1] to [24] DX2000: [1] to [60]	This is the communication data number that is entered and displayed.
Decimal place (can only be set with a Version 4.11 screen)	[0] to [4]	This is the decimal place of the device that you have connected using Modbus, which is set by the specification of the number of digits to the right of the decimal point. You can match the decimal place of the DX to the fixed decimal place of the connected device to display input values or, using action functions, write values to the device. If the input value cannot be displayed using five digits, the sixth digit is rounded to display five significant digits in scientific notation. Example: If there are two decimal places Set value: 2 Displayed value: 123.45
Minimum	–9.9999E+29 to –1.0000E–30 0 1.0000E–30 to 9.9999E+29	The lower limit value that can be input. If a value greater than the maximum is entered for the minimum, the maximum also becomes that value.
Maximum	–9.9999E+29 to –1.0000E–30 0 1.0000E–30 to 9.9999E+29	The upper limit value that can be input. If a value less than the minimum is entered for the maximum, the minimum also becomes that value.
Font	[Font5], [Font6], [Font8], [Font12], [Font16], [Font32]	This is the font for display of Comment block text. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Color	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	This is the color for display of numerals. Background color: Base color (background color of the screen)
Background color	Same choice as for [Color]	This is the color of the background of the Comm. In area. The default setting is [White].
Arrangement	[Left], [Center], [Right]	This is the arrangement of the text label along the X axis within the Comm. In area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.

Synchronize action
►Section 3.3

3.23 Attributes of Digital Operation Components / Modbus In Components



GX/GP DX

- On the DX, the component frame thickness is 1 dot on the DX1000 and 2 dots on the DX2000.
- Switching the max. value and the min. value is not possible.
- If a value smaller than [Minimum] is input for [Maximum], [Minimum] becomes that value.
- If a value larger than [Maximum] is input for [Minimum], [Maximum] becomes that value.
- This cannot be set on DXAdvanced R3.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > Max. height*3 Height = Max. height*3, Y = 0 for height ≥ Max. height*3
Communication	-----	[Ethernet], [Serial]	Selects a communication kind of [Ethernet] or [Serial]. Ethernet: Uses Modbus client send commands Serial: Uses Modbus master send commands
Channel	GX10: [C001] to [C050] GX20-1: [C001] to [C300] GX20-2: [C001] to [C500]	-----	This specifies the communication channel.
Command no.	-----	[1] to [16]	Sets the Modbus send command number specified under Communication.
Decimal place (Can only be set with a DXAdvanced R4.11 screen)	-----	[0] to [4]	This is the decimal place of the device that you have connected using Modbus, which is set by the specification of the number of digits to the right of the decimal point. You can match the decimal place of the DX to the fixed decimal place of the connected device to display input values or, using action functions, write values to the device. If the input value cannot be displayed using five digits, the sixth digit is rounded to display five significant digits in scientific notation. Example: If there are two decimal places Set value: 2 Displayed value: 123.45
Data format	[Decimal], [BCD]	-----	This is the data format for writing to external devices. Decimal: Decimal is used. BCD: BCD is used.
Minimum	When Data format is Decimal:* [-9999999] to [99999999] When Data format is BCD: [0] to [9999]	–9.9999E+29 to –1.0000E–30 0 1.0000E–30 to 9.9999E+29	The lower limit value that can be input. If a value greater than the maximum is entered for the minimum, the maximum also becomes that value. * The setting range is the following GX/GP values with the decimal place assigned to the channel. Example when Data format is Decimal: If the decimal place is 4, -999.9999 to 9999.9999 Example when Data format is BCD: If the decimal place is 1, 0.000 to 9.999
Maximum	When Data format is Decimal:** [-9999999] to [99999999] When Data format is BCD: [0] to [9999]	–9.9999E+29 to –1.0000E–30 0 1.0000E–30 to 9.9999E+29	The upper limit value that can be input. If a value less than the minimum is entered for the maximum, the minimum also becomes that value. ** The setting range is the following values with the decimal place assigned to the channel. Example when Data format is Decimal: If the decimal place is 4, -999.9999 to 9999.9999 Example when Data format is BCD: If the decimal place is 1, 0.000 to 9.999

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

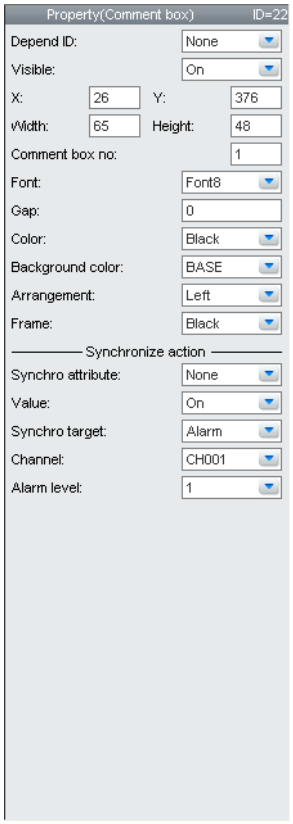
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Font	-----	[Font5], [Font6], [Font8], [Font12], [Font16], [Font32]	Set the character size of the Modbus input. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
String color define	RGB designation [0, 0, 0]	-----	This is the character color for data input values.
Color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [Background color]	Sets the color of the string showing the Modbus input. Background color: Base color (background color of the screen)
Background color define	RGB designation [255, 255, 255]	-----	This is the character color for data input values.
Background color	-----	Same choice as for [Color]	This is the color of the background of the Modbus In area. The default setting is [White].
Touch background color	RGB designation [204, 238, 255]	-----	This is the background color for when the display area is touched on the GX/GP recorder.
Arrangement	[Left], [Center], [Right]	-----	This is the arrangement of the text label along the X axis within the Modbus In area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.

"-----" in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.24 Attributes of Comment Box Components



- This component can be set only on the DX.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
X	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	DX1000: 24(0) to 238 DX2000: 40(0) to 478 ( ) = Status area set to No display	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	DX1000: 2 to 216(240) DX2000: 2 to 440(480) ( ) = Status area set to No display	This is the component height. Height = 2 for height < 2 Y = (Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > Max. height*3 Height = Max. height*3, Y = 0 for height ≥ Max. height*3
Comment box no	DX1000: [1] to [100], DX2000: [1] to [200]	—

*1 DX1000 max. width = 320, DX2000 max. width = 640

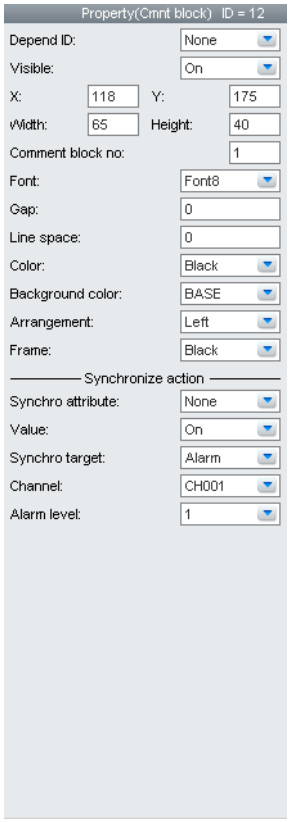
*2 DX1000 min. Y = 24(0), DX2000 min. Y = 40(0), ( ) = Status area set to No display

*3 DX1000 max. height = 216(240), DX2000 max. height = 440(480), ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
Font	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of Comment block text. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Gap	[0] to [15]	Specifies a distance between characters in dots.
Color	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	This is the text display color. BASE: Base color (background color of the screen)
Background color	Same choices as for [Color], and [None]	This is the background color of the Comment box area. The initial setting is [BASE].
Arrangement	[Left], [Center], [Right]	This is the text arrangement in direction of the X-axis in the comment box area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.25 Attributes of Comment Block Components



- This component can be set only on the DX.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
X	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	DX1000: 24(0) to 238 DX2000: 40(0) to 478 ( ) = Status area set to No display	This is the Y-coordinate of the top of the component. When Y < min. Y*2, Y = min. Y*2 When (Y + size) > (min. Y*2 + max. height*3), Y = (min. Y*2 + max. height*3 - size)
Width	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	DX1000: 2 to 216(240) DX2000: 2 to 440(480) ( ) = Status area set to No display	This is the component height. Height = 2 for height < 2 Y = (Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > Max. height*3 Height = Max. height*3, Y = 0 for height ≥ Max. height*3
Comment block no	DX1000: [1] to [50], DX2000: [1] to [100]	—

*1 DX1000 max. width = 320, DX2000 max. width = 640

*2 DX1000 min. Y = 24(0), DX2000 min. Y = 40(0), ( ) = Status area set to No display

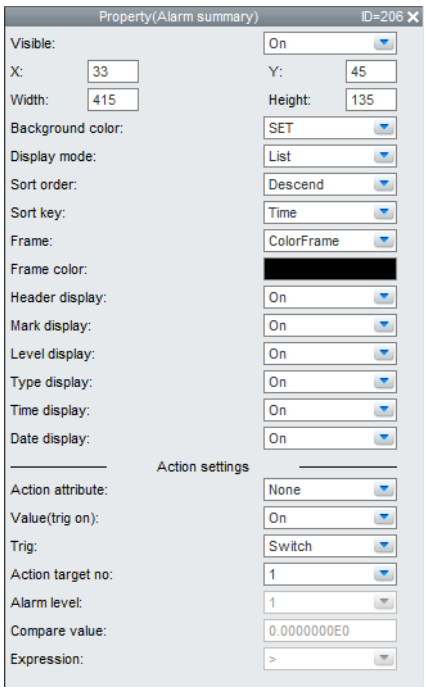
*3 DX1000 max. height = 216(240), DX2000 max. height = 440(480), ( ) = Status area set to No display

3.25 Attributes of Comment Block Components

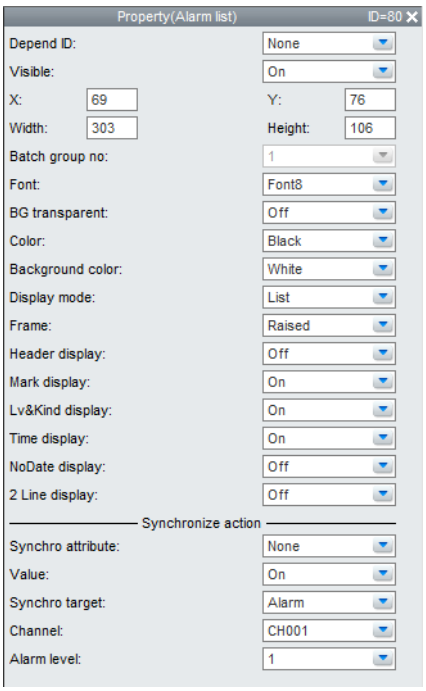
Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
Font	[Font5], [Font6], [Font8], [Font12], [Font16]	This is the font for display of Comment block text. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
Gap	[0] to [15]	Specifies a distance between characters in dots.
Line space	[0] to [15]	The text line space is specified in dots.
Color	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	This is the text display color. BASE: Base color (background color of the screen)
Background color	Same choices as for [Color], and [None]	This is the background color of the Comment block area. The initial setting is [BASE].
Arrangement	[Left], [Center], [Right]	This is the text arrangement in direction of the X-axis in the comment block area. The Y-axis direction always is arranged at the center. Left: Text is displayed left-aligned. Center: Text is displayed centered. Right: Text is displayed right-aligned.

Synchronize action
►Section 3.3

3.26 Attributes of Alarm Summary Components / Alarm List Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y[*2], Y = min. Y[*2] When (Y + size) > (min. Y[*2] + max. height[*3]), Y = (min. Y[*2] + max. height[*3] - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width[*1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > Max. height[*3] Height = Max. height[*3], Y = 0 for height ≥ Max. height[*3]

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Batch group number	-----	Setting range: 1 to multibatch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group number that can be selected within the range of the number of multibatches set in the basic settings on the DX recorder. This item is not displayed when multi-batch is Off.
Font	-----	[Font6], [Font8]	This is the font for Alarm list display. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
BG transparent	-----	[Off], [On]	On: The background in the DX recorder execution panel is transparent. The software screen construction area shows the frame as a dotted line, and indicates that the background transparency is On. **Note: Background transparent display is effective when trend components are placed completely overlapping under list components. It is not effective when the trend components project beyond the list components.**
Color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	This is the text display color. BASE: Base color (background color of the screen)
Background color	[Black], [White], [SET]	[Black], [White]	This is the alarm list background color. SET: Setting of the GX/GP recorder
Display mode	[List], [Watch]		This is the mode for display of the alarm list. List: All alarm events are displayed. Watch: Only presently active alarms are displayed.
Sort order	[Ascend], [Descend]	-----	This selects the sort order.
Sort key	[Time], [Channel], [Level], [Type]	-----	This selects the sort key.
Header display	[Off], [On]	[Off], [On]	This selects whether to display the header at all times. On: Displayed Off: Not displayed

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

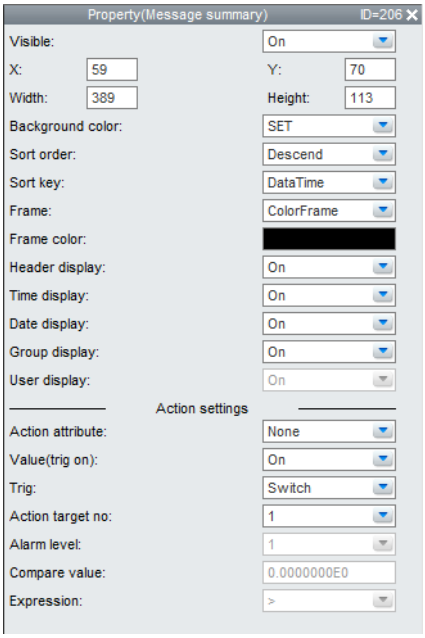
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Mark display	[Off], [On]	[Off], [On]	This selects whether to display alarm event marks and text strings. They are not displayed in the screen construction area. On: Displayed Off: Not displayed
Level display	[Off], [On]	-----	This selects whether to display the alarm level. On: Displayed Off: Not displayed
Type display	[Off], [On]	-----	This selects whether to display the alarm type. On: Displayed Off: Not displayed
Lv&Kind display	[Off], [On]	-----	This selects display/no display of text showing alarm level and type on the execution screen of the DX recorder. On: Displayed Off: Not displayed
Time display	[Off], [On]		This selects whether to display the alarm time. On the DX, this is not displayed in the screen construction area. On: Displayed Off: Not displayed
Date display	[Off], [On]	-----	This selects whether to display the alarm date. On: Displayed Off: Not displayed
NoDate display	-----	[Off], [On]	This selects time display without or with the date on the execution screen of the DX recorder. They are not displayed in the screen construction area. On: The time is displayed without the date. Off: Time and date are displayed. This can be set only when [Date display] is [On].
2 Line display	-----	[Off], [On]	On: One alarm is displayed on two lines on the execution screen of the DX recorder. Channel text and time are displayed separately on two lines. When “Display without date” is [On], the time is displayed on one line. Off: 2-line display not used.

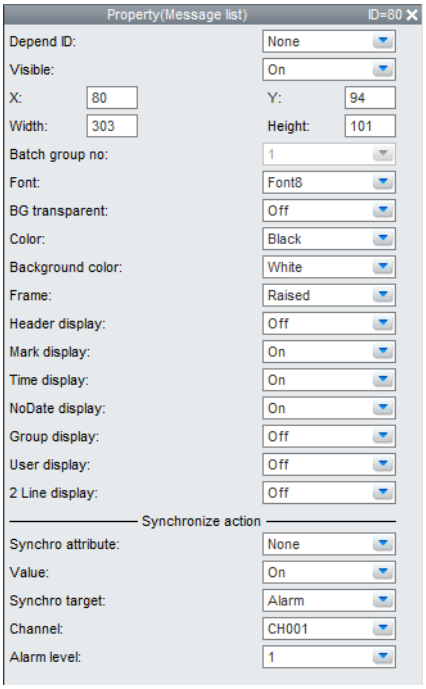
“-----” in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.27 Attributes of Message Summary Components / Message List Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y[*2], Y = min. Y[*2] When (Y + size) > (min. Y[*2] + max. height[*3]), Y = (min. Y[*2] + max. height[*3] - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width[*1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > Max. height[*3] Height = Max. height[*3], Y = 0 for height ≥ Max. height[*3]

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Batch group number	-----	Setting range: 1 to multibatch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group number that can be selected within the range of the number of multibatches set in the basic settings on the DX recorder. This item is not displayed when multi-batch is Off.
Font	-----	[Font6], [Font8]	This is the font for Message list display. The initial setting is [Font6] for DX1000 and [Font8] for DX2000.
BG transparent	-----	[Off], [On]	ON: The background color becomes transparent on the execution screen of the DX recorder. In the Screen construction area of this software, frames are displayed by dotted lines to indicate that background transparent display is On. **Note: Background transparent display is effective when trend components are placed completely overlapping under list components. It is not effective when the trend components project beyond the list components.**
Color	-----	[Red], [Green, [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	This is the text display color. BASE: Base color (background color of the screen)
Background color	[Black], [White], [SET]		This is the background color for the message summary/message list.
Sort order	[Ascend], [Descend]	-----	This selects the sort order.
Sort key	[Data Time], [Write time], [Message], [Group], [User]	-----	This selects the sort key.
Header display	[Off], [On]	[Off], [On]	This selects whether to display the header at all times. On: Displayed Off: Not displayed

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

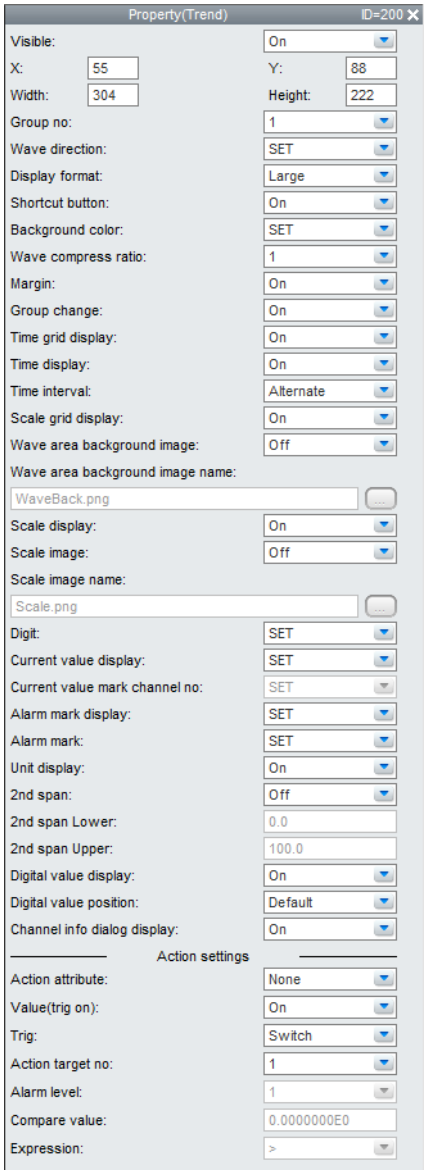
3.27 Attributes of Message Summary Components / Message List Components

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Mark display	-----	[Off], [On]	This selects display/no display of message marks on the execution screen of the DX recorder. They are not displayed in the screen construction area. On: Displayed Off: Not displayed
Time display	[Off], [On]		This selects whether to display the message time. On: Displayed Off: Not displayed
Date display	[Off], [On]	-----	This selects whether to display the message date. On: Displayed Off: Not displayed
NoDate display	-----	[Off], [On]	This selects time display without or with the date on the execution screen of the DX recorder. They are not displayed in the screen construction area. On: The time is displayed without the date. Off: Time and date are displayed. This can be set only when [Date display] is [On].
Group display	[Off], [On]	[Off], [On]	This selects whether to display the message write group. On: Displayed Off: Not displayed
User display	[Off], [On]	[Off], [On]	This selects whether to display the message write user. On: Displayed Off: Not displayed
2 Line display	-----	[Off], [On]	This selects display/no display of messages on two lines on the execution screen of the DX recorder. On: 2 Line display Off: No 2 Line display

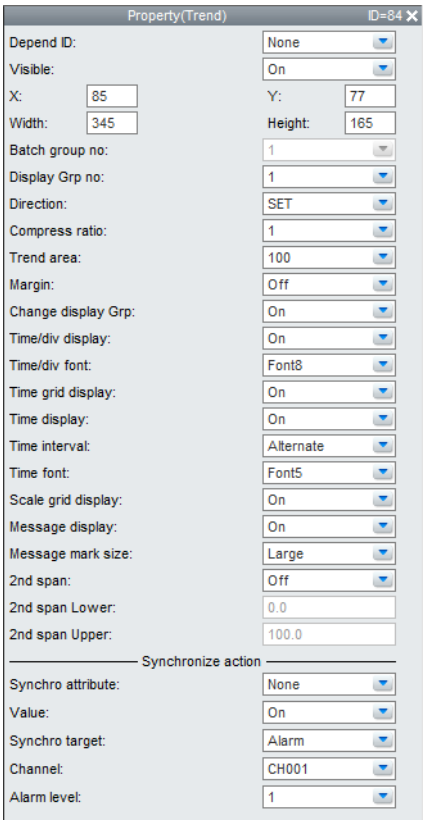
"-----" in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.28 Attributes of Trend Components



GX/GP



DX

- 2nd span upper limit and 2nd span lower limit cannot be switched against each other.
- On the DX, when the [Time Grid Display] and [Scale Grid Display] are [Off], the background fill color is applied without displaying the frame.
- On the DX, when the [Time Grid Display] is [Off], the [Time display] is [Off] and cannot be set.

Note

- Some time may be required until display data are displayed. Please do the following if you want to shorten the time.
  - If All Channel display is On, set it to Off.
  - When displaying data compressed in direction of the time axis, lower the compression ratio or reduce the number of trend components.
  - When trend components are arranged superposed with push button components, communication input components, and switch components, arrange the components so that they are not superposed. When parts are arranged without gaps, they can overlap. Keep a gap of at least 1 dot between parts.
- When the “Compress ratio” for trend components is set to [2] or higher, the old waveform screen may disappear and an intermediate waveform may be displayed in case of display switching with trend display at the DX recorder. This is caused by a limitation of the internal memory capacity, and it is no abnormality. The data are written to the internal memory.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. When Y < min. Y[*2], Y = min. Y[*2] When (Y + size) > (min. Y[*2] + max. height[*3]), Y = (min. Y[*2] + max. height[*3] - size)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width[*1] – Width) for width < Max. width[*1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > Max. height[*3] Height = Max. height[*3], Y = 0 for height ≥ Max. height[*3]
Batch group number	-----	Setting range: 1 to multibatch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group number that can be selected within the range of the number of multibatches set in the basic settings on the DX recorder. This item cannot be set when multi-batch of the DX recorder is Off.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Group no	GX10: [1] to [30] GX20-1: [1] to [50] GX20-2: [1] to [60]	-----	This selects the group number.
Display Grp no	-----	When multi-batch is Off. DX1000: [1] to [10] DX2000: [1] to [36] When multi-batch is On DX1000: [1] to [6] DX2000: [1] to [12]	Display on the builder screen of the DX recorder is made as “Group No.”. The group selection range differs according to the batch.
Wave direction Direction	[SET], [Horizontal], [Vertical]		This is the waveform flow direction. SET: Setting of the GX/GP/DX recorder Vertical: Vertical waveform direction Horizontal: Horizontal waveform direction
Display format	[Large], [Small], [Auto]	-----	This selects the trend display format. Small: Display format similar to the GX10 trend screen Large: Display format similar to the GX20 trend screen Auto: The display format is determined automatically from the width and height of the trend component.
Shortcut button	[Off], [On]	-----	This selects whether to display a shortcut button in the trend display area. On: Displayed Off: Not displayed
Background color	[White], [Black], [SET]	-----	This selects the background color of the trend display area. SET: Setting of the GX/GP recorder
Wave compress ratio	[1], [2], [3], [4], [5], [6], [7], [8]	-----	This selects the number of data represented by 1 dot.
Compress ratio	-----	[1], [2], [4], [5], [6], [7], [8]	
Trend area	-----	[50], [60], [70], [80], [90], [100]	The rate for the width of the waveform display is calculated with the width in direction of the time axis as 100 %. This is used when “Trend blank” of the DX recorder is ON.
Margin	[Off], [On]	[Off], [On]	Sets whether or not to display a margin on both sides in the direction of the span. Off: No margin On: Margin of 3% of component width is added in the direction of the span (Cannot be set on DXAdvanced R3)
Group change	[Off], [On]	-----	Sets whether or not to switch the group display in the DX recorder’s execution panel when the left/right keys are pressed. On: Switched Off: Not switched (Cannot be set on DXAdvanced R3)
Display group switching	-----	[Off], [On]	
Time/div display	-----	[Off], [On]	This selects whether to display Time/div by specifying [On] or [Off].

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Time/div font	-----	[Font6], [Font8]	This is the font for display of Time/div. Setting is not possible when “Time/div display” is [Off]. The initial setting is [Font6] for DX1000 and [Font8] for DX2000. • This can be set only when [Time/div display] is [On].
Time grid display	[Off], [On]		This selects whether to display the time by specifying [On] or [Off]. When set to [Off], the [Time display] and [Time font] items cannot be set.
Time display	[Off], [On]		This selects whether to display the grid time by specifying [On] or [Off]. (Cannot be set on DXAdvanced R3)
Time interval	[Alternate], [EveryGrid]		Sets the interval for displaying the time. EveryGrid: Displays in all time grids Alternate: Displays in every other time grid This can be set only when [Time grid display] and [Time display] are [On]. (Cannot be set on DXAdvanced R3)
Time font	-----	[Font5], [Font6]	This is the font for display of the grid time. This can be set only when [Time grid display] and [Time display] are [On].
Scale grid display	[Off], [On]		This selects whether to display the scale grid by specifying [On] or [Off]. (Cannot be set on DXAdvanced R3)
Wave area background image	[Off], [On]	-----	This selects whether to display an image in the waveform area by specifying [On] or [Off].
Wave area background image name	[WaveBack.png]	-----	This specifies the image file to display in the waveform area.
Scale display	[Off], [On]	-----	This selects whether to display the scale by specifying [On] or [Off].
Scale image	[Off], [On], [SET]	-----	This selects whether to display an image in the scale display area by specifying [On] or [Off]. On: Displayed Off: Not displayed SET: Setting of the GX/GP recorder
Scale image name	[Scale.png]	-----	This specifies the image file to display in the scale display area.
Digit	[Normal], [Fine], [SET]	-----	This selects the number of displayed digits for the scale values shown on the scale. Normal: Two significant digits of the scale value Fine: Three significant digits of the scale value SET: Setting of the GX/GP recorder
Current value display	[Mark], [Bar], [SET]	-----	This sets how to display the current values shown on the scale image. Mark: Current value marks of all the channels registered in the group are displayed. Bar: The representative channel for each scale image is displayed in a bar graph. SET: Setting of the GX/GP recorder

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
( ) = Status area set to No display

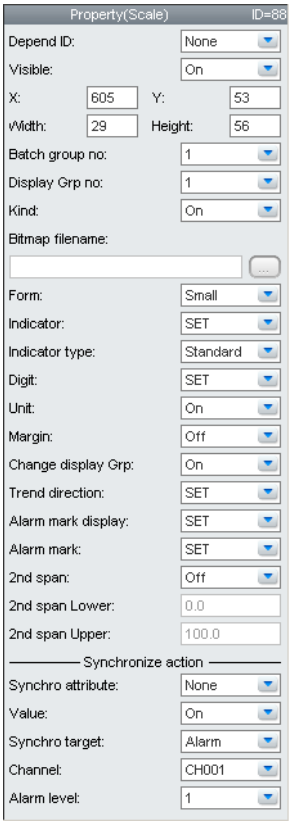
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Current value mark channel no	[0 Digit], [3 Digit], [4 Digit], [SET]	-----	This sets the number of channel number digits to display when the current value display on the scale image is current value marks. 0 Digit: Channel numbers are not displayed on current value marks. 3 Digit: Three-digit channel numbers are displayed on current value marks. 4 Digit: Four-digit channel numbers are displayed on current value marks. SET: Setting of the GX/GP recorder
Alarm mark display	[Off], [On], [SET]	-----	This selects whether to display alarm marks on the scale image. Off: Alarm marks are not displayed. On: Alarm marks are displayed. SET: Setting of the GX/GP recorder
Alarm mark	[Alarm], [Fixed], [SET]	-----	This selects the shape of alarm marks to display on the scale image. Alarm: The alarm mark is displayed with a trapezoid. Fixed: The alarm mark is displayed with a triangle. SET: Setting of the GX/GP recorder
Unit display	[Off], [On]	-----	This selects whether to display the unit on the scale image by specifying [On] or [Off].
Message display	-----	[Off], [On]	This selects display/no display of message marks. On: Displayed Off: Not displayed
Message mark size	-----	[Small], [Large]	This is the size for display of message marks. Setting is not possible when “Message display” is [Off]. • This can be set only when [Message display] is [On].
2nd span	[Off], [On]		This selects effective/disabled for 2nd span. On: Effective Off: Disabled
2nd span Lower	[0.0] to [90.0]		The 2nd span lower limit is set between setting span lower limit (0.0 %) and upper limit (100.0 %). Setting is not possible when “2nd span” is [Off]. (Decimal settings are not available on the DXAdvancedR3 screen.)
2nd span Upper	[10.0] to [100.0]		The 2nd span upper limit is set between setting span lower limit (0.0 %) and upper limit (100.0 %). Setting is not possible when “2nd span” is [Off]. (Decimal settings are not available on the DXAdvancedR3 screen.)
Digital value display	[Off], [On]	-----	This selects whether to display the digital value by specifying [On] or [Off].
Digital value position	[Default], [Top], [Bottom], [Left], [Right]	-----	This specifies the position to display the digital value. Default: Displayed at [Right] when Wave direction is [Horizontal] and [Top] when [Vertical]. Top: Displayed at the top of the waveform. Bottom: Displayed at the bottom of the waveform. Left: Displayed to the left of the waveform. Right: Displayed to the right of the waveform.

“-----” in the table indicates that the attribute is not available.

Operation setting (GX/GP) or synchronize action (DX)
►Section 3.3

3.29 Attributes of Scale Components



- This component can be set only on the DX.
- Bitmap components can be assigned to scale components.
- If bitmap components overlap with scale components that display bitmap components, only the bitmap of the component in front is displayed, and components in back are displayed in a dotted frame.
- When scale components are assigned bitmaps that cannot be displayed on the DX recorder, an X appears in the center of the component.
- When [Kind] is [Off], [Bmp filename], [...] button, [Indicator], [Digit], [Alarm mark display], [Alarm mark], and [Unit] cannot be set.
- When [Kind] is [On], [Bmp filename] and the [...] button cannot be set.
- When [Kind] is [Bmp], [Digit] cannot be set.
- When [Alarm mark display] is [Off], [Alarm mark] cannot be set.
- When [2ndspan] is [Off], [2nd span Lower] and [2nd span Upper] cannot be set.
- When [Unit] is [Off], scale units are not displayed.

Note

- Place bitmap files into the same directory as display data (.CDC). The bitmap files cannot be displayed when the data are in a different directory.
- If you assign a bitmap that cannot be displayed on the DX recorder to a scale component, a "×" is displayed in the center of the component.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
X	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	DX1000: 24(0) to 238 DX2000: 40(0) to 478 ( ) = Status area set to No display	This is the Y-coordinate of the top of the component. Y = Min. Y*2 for Y < Min. Y*2 Y = (Min. Y*2 + Max. height*3 – Height) for (Y + Height) > (Min. Y*2 + Max. height*3)
Width	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	DX1000: 2 to 216(240) DX2000: 2 to 440(480) ( ) = Status area set to No display	This is the component height. Height = 2 for height < 2 Y = (Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > Max. height*3 Height = Max. height*3, Y = 0 for height ≥ Max. height*3
Batch group number	Setting range: 1 to multi-batch number set by the basic settings of the DX recorder DX1000: [1] to [6] DX2000 standard memory: [1] to [6] DX2000 expanded memory: [1] to [12]	This is the batch group number which can be selected within the range of the multi-batch number set by the basic settings of the DX recorder. This item cannot be set when multi-batch of the DX recorder is OFF.
Display Grp no	when multi-batch is Off. DX1000: [1] to [10] DX2000: [1] to [36] when multi-batch is On. DX1000: [1] to [6] DX2000: [1] to [12]	This is the batch group number that can be selected within the range of the number of multibatches set in the basic settings on the DX recorder. The group selection range differs according to the batch.
Kind	[Off], [On], [Bmp]	This is the scale plate kind. Off: A simple scale plate without scale values On: Display with the scale plate display divided into the set number of divisions and drawing of scale values at fixed intervals. Bitmap: A bitmap designed by the user is used for the scale plate.
Bitmap filename	Input is possible for max. 51 single-byte alphanumeric characters.	This specifies the file name of the bitmap to be displayed. This is effective when “Kind” is [Bmp]. This is the name of the bitmap file to be pasted onto the scale plate. The bitmap file read destination is the folder that the latest display data (.CDC) has saved.
Form	[Small], [Large]	Scale band format. When the format is [Small] and the channel’s green band setting is [Off] in the settings file, the area for the scale value and units is filled with the background color of the scale band. If there is no settings file, the channel’s green band setting is Off. Small: A small scale plate The same image as for 4-screen display with DX2000 or the scale plate with DX1000. Large: A large scale plate This is the same image as for the scale plate at the time of other than 4-screen display with DX2000.

*1 DX1000 max. width = 320, DX2000 max. width = 640

*2 DX1000 min. Y = 24(0), DX2000 min. Y = 40(0), ( ) = Status area set to No display

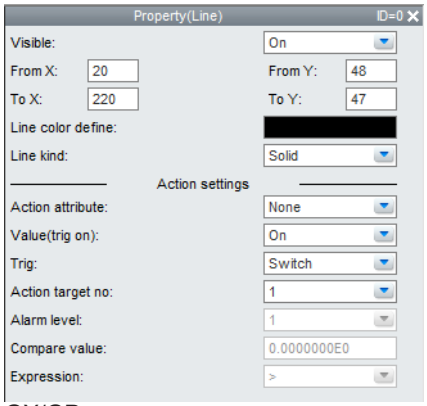
*3 DX1000 max. height = 216(240), DX2000 max. height = 440(80), ( ) = Status area set to No display

Attribute	Set value/choice (Underlined items are initial set values)	Description, conditions
Indicator	[SET], [Mark], [Bar]	This is the indicator displayed on the scale plate. Setting is not possible when “Kind” is [Off]. SET: Setting of the DX recorder Mark: Present value marks are displayed for the number of channels registered to the group. Bar: Bars are displayed for the number of channels registered to the group.
Indicator type (can only be set with a Version 4.01 screen and a Version 4.11 screen)	[Standard], [Micro], [Small], [Balance]	Selects the indicator format.
Digit	[SET], [Normal], [Fine]	This is the number of display digits of the scale value displayed on the scale plate. Setting is not possible when “Kind” is [Off]. SET: Setting of the DX recorder Normal: Effective digits of the scale value: 2 digits Fine: Effective digits of the scale value: 3 digits
Unit (can only be set on DXAdvanced R4.01 or R4.11)	[Off], [On]	Selects whether or not to display the units. On: The units are displayed Off: The units are not displayed
Margin (can only be set on DXAdvanced R4.01 or R4.11)	[Off], [On]	Sets whether or not to display a margin on both sides in the direction of the span. On: Margin of 3% of component width is added in the direction of the span Off: The margin is not displayed
Display group switching (can only be set on DXAdvanced R4.01 or R4.11)	[Off], [On]	Sets whether or not to switch the group display in the DX recorder’s execution panel when the left/right keys are pressed. On: Switched Off: Not switched
Trend direction	[SET], [Vertical], [Horizontal]	This is the waveform flow direction. SET: Setting of the DX recorder Vertical: Vertical waveform direction Horizontal: Horizontal waveform direction
Alarm mark display	[Off], [On], [SET]	Selection of alarm mark display/no display Setting is not possible when “Kind” is [Off]. Off: No alarm mark display On: Alarm mark display SET: Setting of the DX recorder
Alarm mark	[Alarm], [Fixed], [SET]	This selects the alarm mark style. Setting is not possible when “Kind” is [Off] or “Alarm mark display” is [Off] Alarm: Color change may occur at the time of trapezoid display and at the time of alarm ON. Fixed: No color change at the time of trapezoid display and at the time of alarm ON. SET: Setting of the DX recorder
2nd span	[Off], [On]	This selects effective/disabled for 2nd span. On: Effective Off: Disabled
2nd span Lower (On Version3 screens, no decimal places allowed)	[0.0] to [90.0]	The 2nd span lower limit is set between setting span lower limit (0.0 %) and upper limit (100.0 %). Setting is not possible when “2nd span” is [Off].
2nd span Upper (On Version3 screens, no decimal places allowed)	[10.0] to [100.0]	The 2nd span lower limit is set between setting span lower limit (0.0 %) and upper limit (100.0 %). Setting is not possible when “2nd span” is [On].

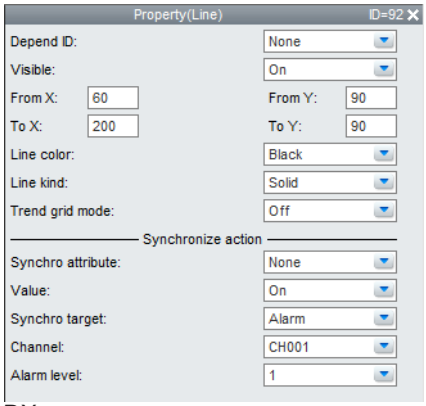
Action settings (GX/GP) or Synchronize action (DX)

►Section 3.3

3.30 Attributes of Line Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
From X	GX10/GP10: 0 to 639 GX20/GP20: 0 to 799	DX1000: 0 to 319 DX2000: 0 to 639	This is the X-coordinate of the start point for component creation. From X = 0 for From X < 0 From X = (Max. width[*1] – 1) for From X > (Max. width[*1 – 1)]
From Y	GX10/GP10: 30(0) to 479 GX20/GP20: 30(0) to 599	DX1000: 24(0) to 239 DX2000: 40(0) to 479	This is the Y-coordinate of the start point for component creation. From Y = Min. Y[*2] for From Y < Min. Y[*2] From Y = (Min. Y*2 + Max. height[*3] – 1) for From Y > (Min. Y[*2] + Max. height[*3] – 1)
	( ) = Status area set to No display		
To X	GX10/GP10: 0 to 639 GX20/GP20: 0 to 799	DX1000: 0 to 319 DX2000: 0 to 639	This is the X-coordinate of the end point for component creation. To X = 0 for To X < 0 To X = (Max. width[*1] – 1) for To X > (Max. width[*1] – 1)
To Y	GX10/GP10: 30(0) to 479 GX20/GP20: 30(0) to 599	DX1000: 24(0) to 239 DX2000: 40 (0)to 479	This is the Y-coordinate of the end point for component creation. To Y = Min. Y[*2] for To Y < Min. Y[*2] To Y = (Min. Y[*2] + Max. height[*3] – 1) for To Y > (Min. Y[*2] + Max. height[*3] – 1)
	( ) = Status area set to No display		
Line color	-----	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE]	This is the line color. BASE: Base color (background color of the screen)

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

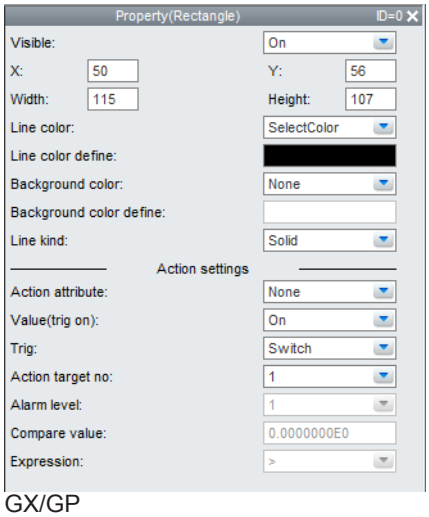
*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Line kind	[Solid], [Dotted], [Dash], [Longdash]		The line kind is set. Solid: A solid line Dotted: A line with continuous repetition of two dots and two blank spaces. Dash: A line with continuous repetition of four dots and four blank spaces. Longdash: A line with continuous repetition of six dots and two blank spaces.
Trend grid (can only be set on DXAdvanced R4.01 or R4.11)	-----	[On], [Off]	Sets whether or not it should act as the grid of the dependant trend component. ON: Plotted as the grid of the trend component specified by the Depend ID. Off: Displayed as lines.

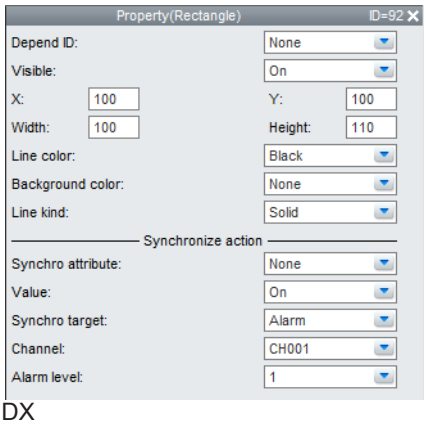
Action settings (GX/GP) or Synchronize action (DX)

►Section 3.3

3.31 Attributes of Rectangle Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width*1 – Width) for (X + Width) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. Y = Min. Y*2 for Y < Min. Y*2 Y = (Min. Y*2 + Max. height*3 – Height) for (Y + Height) > (Min. Y*2 + Max. height*3)
	( ) = Status area set to No display		
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570)	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > Max. height*3 Height = Max. height*3, Y = 0 for height ≥ Max. height*3
	( ) = Status area set to No display		

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

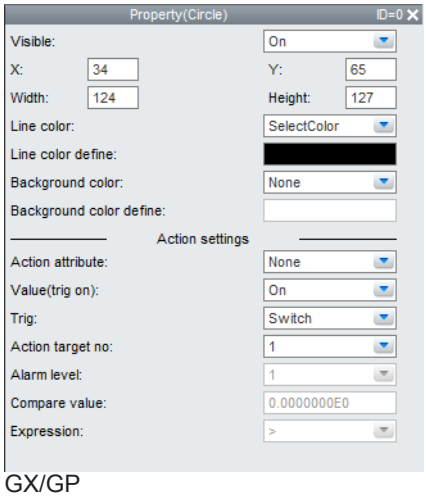
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Line color	[None], [SelectColor]	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [None]	This is the line color. BASE: Base color (background color of the screen) None: No line (outer frame) SelectColor: The color defined for Line color define
Line color define	RGB designation [0, 0, 0]	-----	Specify this attribute when Line color is set to SelectColor.
Background color	[None], [SelectColor]	Same choice as for “Line”, [None]	This is the color inside the rectangle. None: No background color SelectColor: The color defined for Background color define
Background color define	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is set to SelectColor.
Line kind	[Solid], [Dotted], [Dash], [Longdash]		This is the kind of line for drawing the rectangle. Solid: A solid line Dotted: A line with continuous repetition of two dots and two blank spaces. Dash: A line with continuous repetition of four dots and four blank spaces. Longdash: A line with continuous repetition of six dots and two blank spaces.

“-----” in the table indicates that the attribute is not available.

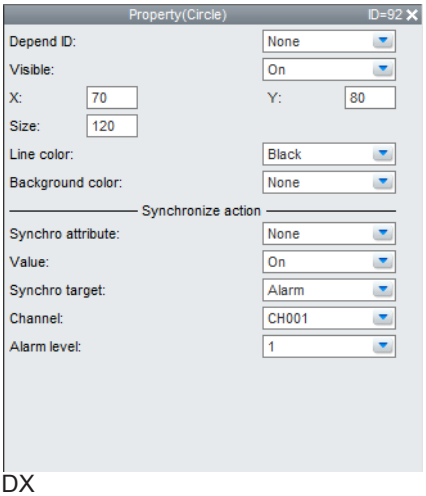
Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.32 Attributes of Circle Components



GX/GP



DX

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the square enclosing the component. X = 0 for X < 0 X = (Max. width*1 – size) for (X + size) > Max. width*1
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598 ( ) = Status area set to No display	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the square enclosing the component. Y = Min. Y*2 for Y < Min. Y*2 Y = (Min. Y*2 + Max. height*3 – size) for (Y + size) > (Min. Y*2 + Max. height*3)
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	-----	This is the component width. Width = 2 for width < 2 X = (Max. width*1 – Width) for width < Max. width*1 and (X + Width) > Max. width*1 Width = Max. width*1, X = 0 for width ≥ Max. width*1
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570) ( ) = Status area set to No display	-----	This is the component height. Height = 2 for height < 2 Y = (Max. height*3 – Height) for height < Max. height*3 and (Y + Height) > Max. height*3 Height = Max. height*3, Y = 0 for height ≥ Max. height*3

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

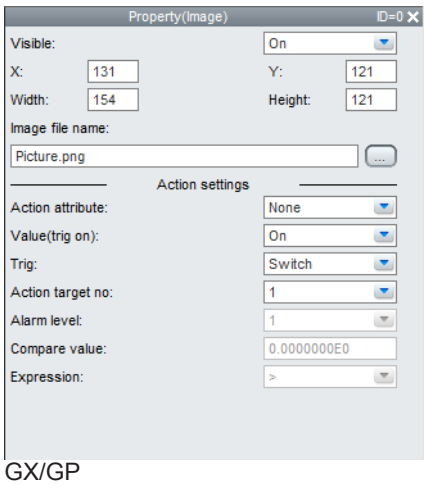
Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Size	-----	DX1000: 2 to 216(240) DX2000: 2 to 440(480) ( ) = Status area set to No display	This is the size of the square enclosing the component. Size = 1 for Size < 1 X = (Max. height[*3] – Size) for height < Max. height[*3] and (Y + Size) > Max. height[*3] Y = (Min. Y[*2] + Max. height[*3] – Size) for Size < Max. height[*3] and (Y + Size) > (Min. Y[*2] + Max. height[*3]) Size = Max. height[*3], Y = Min. Y[*2] for Size ≥ Max. height[*3] Size = Max. height[*3], X = (Max. width[*1] – Max. height[*3]) for Size ≥ Max. height[*3] and (X + Max. height[*3]) > Max. width[*1]
Line color	[None], [SelectColor]	[Red], [Green], [Blue], [B.violet], [Brown], [Orange], [Y.green], [Light blue], [Violet], [Gray], [Lime], [Cyan], [Dark blue], [Yellow], [Light gray], [Purple], [Pink], [L.brown], [L.green], [Dark gray], [Olive], [Dark cyan], [S.green], [Black], [White], [BASE], [None]	This is the line color. BASE: Base color (background color of the screen) None: No line (outer frame) SelectColor: The color defined for Line color define
Line color define	RGB designation [0, 0, 0]	-----	Specify this attribute when Line color is set to SelectColor.
Background color	[None], [SelectColor]	Same choice as for “Line”, [None]	This is the color inside the circle. None: No background color SelectColor: The color defined for Background color define
Background color define	RGB designation [255, 255, 255]	-----	Specify this attribute when Background color is set to SelectColor.

“-----” in the table indicates that the attribute is not available.

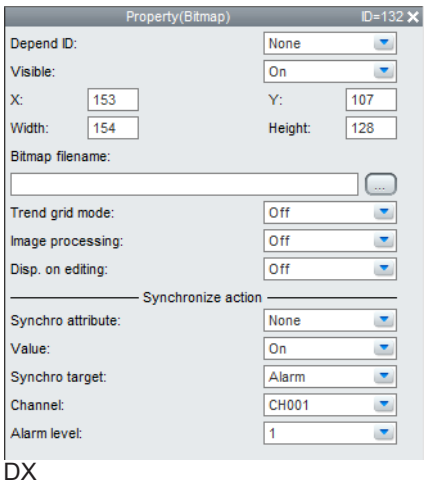
Action settings (GX/GP)or Synchronize action (DX)

►Section 3.3

3.33 Attributes of Image Components/Bitmap Components



GX/GP



DX

On the DX, the following limitations exist for setting of attributes of bitmap components.

- [Visible] can only be set when [Depend ID] is set to [None].
- When setting [Depend ID] to the ID of a trend component, if [Trend grid mode] is turned [On], [Disp. on editing] is [On] and cannot be set.
- When setting [Depend ID] to the ID of a trend component, if [Trend grid mode] is turned [Off], display in the builder screen becomes available for setting
- When setting [Depend ID] to the ID of a trend component, if [Trend grid mode] is turned [On], [Image processing] is [Off] and cannot be set.
- When setting [Depend ID] to the ID of a trend component, if [Trend grid mode] is turned [Off], you can set [Image processing].
- If [Trend grid mode] is [On], when [Depend ID] is set to the ID of a trend component, [Disp. on editing] is [On] and cannot be set.
- If [Trend grid mode] is [On], when [Depend ID] is set to the ID of a component other than a trend component, [Disp. on editing] can be set.
- If [Trend grid mode] is [On], when [Depend ID] is set to the ID of a trend component, [Image processing] is [Off] and cannot be set.
- If [Trend grid mode] is [On], when [Depend ID] is set to the ID of a component other than a trend component, [Image processing] can be set.

Note

GX/GP

- Place image files (PNG) in the same directory as the image data (.GCD). If they are in different directories, the image cannot be displayed.

DX

- When “Image processing” is [On], some time may be required until display of display data at the DX recorder. Set to [Off] if you want to shorten the time.
- Place bitmap files into the same directory as display data (.CDC). The bitmap files cannot be displayed when the data are in a different directory.
- When display data using bitmap components are sent to the internal memory of the DX recorder, the bitmap image is not displayed on the execution screen. For display of bitmap images which have not been displayed even once, the external storage media (CF card) where these bitmap files are stored, must be inserted into this unit.
- For arrangement of bitmap components overlapping each other and using them with display switching, the external storage media (CF card) where these bitmap files are stored must be inserted into the DX recorder.
- When bitmap components are assigned bitmaps that cannot be displayed on the DX recorder, an X appears in the center of the component.

List of Settings

Refer to Section 3.3 for attributes without explanations in the list of settings.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
X	GX10/GP10: 0 to 638 GX20/GP20: 0 to 798	DX1000: 0 to 318 DX2000: 0 to 638	This is the X-coordinate of the left side of the component. X = 0 for X < 0 X = (Max. width[*1] – Width) for (X + Width) > Max. width[*1]
Y	GX10/GP10: 30(0) to 478 GX20/GP20: 30(0) to 598	DX1000: 24(0) to 238 DX2000: 40(0) to 478	This is the Y-coordinate of the top of the component. Y = Min. Y[*2] for Y < Min. Y[*2] Y = (Min. Y[*2] + Max. height[*3] – Height) for (Y + Height) > (Min. Y[*2] + Max. height[*3])
	( ) = Status area set to No display		
Width	GX10/GP10: 2 to 640 GX20/GP20: 2 to 800	DX1000: 2 to 320 DX2000: 2 to 640	This is the component width. Width = 2 for width < 2 X = (Max. width*[1] – Width) for width < Max. width[*1] and (X + Width) > Max. width[*1] Width = Max. width[*1], X = 0 for width ≥ Max. width[*1]
Height	GX10/GP10: 2 to 480(450) GX20/GP20: 2 to 600(570)	DX1000: 2 to 216(240) DX2000: 2 to 440(480)	This is the component height. Height = 2 for height < 2 Y = (Min. Y[*2] + Max. height[*3] – Height) for height < Max. height[*3] and (Y + Height) > (Min. Y[*2] + Max. height[*3]) Height = Max. height[*3], Y = Min. Y[*2] for height ≥ Max. height[*3]
	( ) = Status area set to No display		
Image file name	Input is possible for max. 32 single-byte alphanumeric characters. [Picture.png]	-----	This specifies the PNG file. The PNG file is loaded from the folder in which the most recent image data (.GCD) was saved. To change the folder, click the button on the right of the file name text box.

*1 Max. width for the GX10/GP10 = 640, max. width for the GX20 = 800, max. width for the DX1000 = 320, max. width for the DX2000 = 640

*2 Min. Y for the GX10/GP10/GX20/GP20 = 30 (0), min. Y for the DX1000 = 24 (0), min. Y for the DX2000 = 40 (0)
The value in parentheses is for when the status display section is hidden.

*3 Max. height for the GX10/GP10 = 480 (450), max. height for the GX20/GP20 = 800 (770), max. height for the DX1000 = 216 (240), max. height for the DX2000 = 440 (480). The value in parentheses is for when the status display section is hidden.

Attribute	Set value/choice (Underlined items are initial set values)		Description, conditions
	GX/GP	DX	
Bitmap filename	-----	Input is possible for max. 51 single-byte alphanumeric characters.	This specifies the bitmap file name. The bitmap file read destination is the folder that the latest display data (.CDC) has saved. To browse for a new file, click the button to the right of the file name box.
Trend grid (can only be set with a Version 4.01 screen and a Version 4.11 screen)	-----	[Off], [On]	Sets whether or not it should act as the grid of the trend component. On: Acts as the trend grid Off: Does not act as the trend grid If the Depend ID is set to On while the Trend component was being set, [Disp. on editing] is fixed to [On] and cannot be changed, and [Image Processing] is also fixed to [Off] and cannot be changed.
Image processing	-----	[Off], [On]	This sets image processing conversion at the time of bitmap file reading to [On] or [Off]. When this is set to On, some time is required until display. This time is approximately 30 sec when the image size is 640 x 480 pixel. On: When a bitmap is read in on the DX recorder, display is made after optimizing for the display of the DX recorder. Off: No image processing
Disp. On editing	-----	[Off], [On]	On: Bitmap images are displayed on the execution screen of the DX recorder. Off: Dotted line frames and characters indicating that these are bitmap components are displayed.

"-----" in the table indicates that the attribute is not available.

Specifying the Image File Name

If you specify a folder and try to assign an image with a file name that already exists in the image folder, a message will appear.

Overwrite: The specified image is overwritten.
Copy to Different Name: The specified image is copied to a different name.
Cancel: Image assignment is canceled.

If you select Copy to Different Name, the image is assigned a file name consisting of the existing file name followed by an underscore followed by a serial number that begins with 0 and copied in the image folder. Serial numbers range from 0 to 7000. (For example, sample.bmp would be copied to sample_0.bmp.)
If adding the underscore and serial number would cause the file name to exceed the maximum number of characters (64 characters for PNG, 51 characters for BMP), enough characters are removed from the end of the file name (excluding the extension) so that it contains the maximum number of characters.
(For example, if sample....abcde.bmp contains 51 characters, it would be copied as sample....abc_0.bmp.)

Action settings (GX/GP)or Synchronize action (DX)
►Section 3.3

4.1 Receiving Display Data from GX/GP/DX Recorder

If screen data (custom display data) is received from the GX/GP/DX recorder via communications, it is reflected on DAQStudio.
If the Batch function (DX only) is MultiBatch, the Batch/Group list page appears in the work area, and the Group list page is not displayed.
If the Batch function (DX only) is Off or On, the Group list page appears in the work area, and the Batch/Group list is not displayed.
When receiving screen data from the GX/GP/DX recorder, the Channel/alarm list page is displayed in the work area.
If the GX/GP/DX includes the advanced security function (/AS option or /AS1 option), set up the GX/GP/DX in advance as follows. (In the example of setting up the GX/GP/DX below, the user ID is not set.)

GX/GP main unit (with /AS option) settings

1. Select **MENU** key > **Browse** tab > **Setting** > Setting menu **Security settings** > **Basic settings**, and set **Communication** to **Login**.
2. Select Setting menu **Security settings** > **User settings**, and set **Mode** to **Touch operation + Communication**. Enter the user name, and return to the operation screen.

If you are logging in for the first time, set the password.

3. Press **MENU**, and then tap the user name.
   The login screen appears.
4. Don't enter the user ID, set the user name and default password, and tap **OK**.
   The default password for user number 1 is User001.
5. Set a new password in New Password and New Password Again, and then tap **OK**.
   You will be logged in.

DX main unit (with /AS1 option) settings

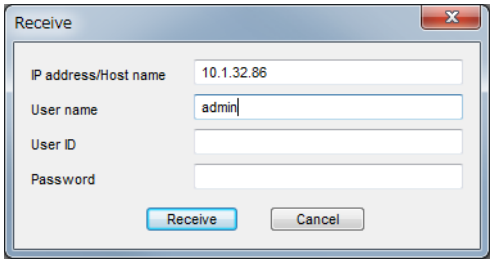
1. Press **MENU** (to switch to setting mode), hold down **FUNC** for 3 s (to switch to basic setting mode), and select the **Environment** tab > **Security** > **Communication**, and set **Login**.
2. Select the **Menu** tab > **User registration** > **Admin settings** > **Mode**, set **Key+Comm**, enter the user name, and return to the operation screen.

If a password is set, this concludes the setup. If no password set, perform the following additional steps.

3. Press **FUNC**, select **Admin1**, then press **DISP/ENTER**.
4. Skip the user ID and select **ENT**.
5. Enter Admin1 for the password, then select **ENT**.
6. Enter a new password (between 6 and 20 alphanumeric characters, no spaces allowed), then select **ENT**.
7. Reenter the new password and select **ENT**.

Procedure

1. Select **Communication** > **Receive**.
   "Receive" dialog box appears.



2. Enter the GX/GP/DX recorder's IP address and host name, and the user name, user ID, and password.
   IP address/Host name: Up to 64 single-byte alphanumeric characters can be entered. The initial setting is "admin."
   User name: Up to 20 alphanumeric characters can be entered.
   User ID: Up to 20 alphanumeric characters can be entered. Set this when the GX/GP/DX recorder includes the /AS option or /AS1 option and you want to use user IDs.
   Password: Up to 20 single-byte alphanumeric characters can be entered.
3. Click **[Receive]**.
   A message is displayed.
4. Click **[OK]**.
   All custom display screen data in the internal memory of the GX/GP/DX recorder and on the external storage medium (SD card or CF card) are received to the save object folder.
5. Save the file. (►Section 2.5)

Explanation

Only the items set for the GX/GP/DX recorder are entered for IP address/host name, user name, and password. The IP address/host name and user name entered at this time are saved, and they are displayed when the software is started the next time. The user ID and password are not stored. They cleared each time.

The extension of data which can be received by the software from the GX/GP recorder is GCD, GCS, and PNG. For the DX recorder, it is CDC, CDS, and bmp.
The file name is as shown below.

GX/GP
- Custom01.GCD to Custom30.GCD: Image data.
- Setting.GCS: Settings of the GX/GP recorder.
- Arbitrary_name.png: The image file assigned to the component.

DX
- Internal1.CDC to Internal3.CDC: Screen construction file. Saved in the internal memory of the DX recorder.
- External1.CDC to External25.CDC: Screen construction file. Saved in the CF card inserted into the DX recorder.
- Setting.CDS: These are the DX recorder settings.
- Arbitrary_name.bmp: The bitmap file assigned to the component. They are saved in the CF card inserted into the DX recorder.

When screen data is received from the GX/GP/DX recorder, the software screen version is as follows.

- The software screen version is the newest version in the received display data (.GCD or .CDC).

All custom display screen data (.GCD or .CDC), setting files (.GCS or .CDS), and image files (.png or .bmp) in the GX/GP/DX recorder are received to the folder that the latest display data has been saved.
The display data and image file must be saved every time they have been received from GX/GP/DX recorder. (►Section 2.5.)
Custom display screen data (.GCD or .CDC) can be received to GX/GP recorders with release number R2 and later and DX recorders with release number R3 and later.

Notes on Firewalls

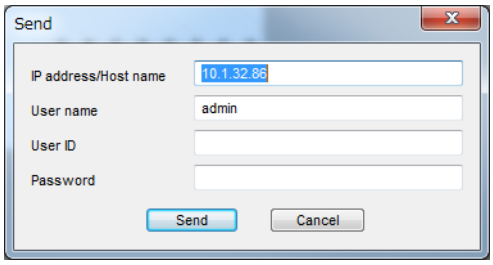
Depending on the Windows version, a firewall-related warning appears when receiving screen data from the GX/GP/DX. Check the contents of the message, and allow access.

4.2 Sending Display Data to GX/GP/DX Recorder

If the GX/GP/DX includes the /AS1 option, perform the GX/GP/DX main unit (with /AS1 option) settings procedure in section 4.1 in advance.

Procedure

1. Select **Communication > Send**.
   "Send" dialog box appears.



2. Enter the IP address/host name of the GX/GP/DX recorder, the user name, and the password.
   IP address/Host name: Up to 64 single-byte alphanumeric characters can be entered.
   User name: Up to 20 alphanumeric characters can be entered. The initial setting is "admin."
   User ID: Up to 20 alphanumeric characters can be entered. This is only set if the GX/GP/DX recorder includes the /AS1 option and the user ID is used. ([User ID] is not displayed on the DXAdvanced R3 screens.)
   Password: Up to 20 single-byte alphanumeric characters can be entered.
3. Click **[Send]**.
   A message is displayed.
4. Click **[OK]**.
   The opening display data (including editing display data) and image files used for the display data are sent to the GX/GP/DX recorder.

Explanation

Only the items set for the GX/GP/DX recorder are entered for IP address/host name, user name, user ID, and password. The IP address/host name and user name entered at this time are saved, and they are displayed when the software is started the next time. The user ID and password are not stored. They cleared each time. Once you close the [Send] dialog box, the previously entered user ID and password become blank when the dialog box is reopened.
When sending data, if there are any bitmap files that are not supported by the GX/GP/DX recorder, a message (W8039, see section 5.1) appears.
Before sending data, please check the options on the main unit. If you try to send screen data that requires options to a GX/GP/DX recorder without those options, a message (W8042, see section 5.1) appears.

Options to check

Component	Attribute	Setting	Option
System icon	Type	Math	Math
		UserLock	AS or AS1
		User & status	AS1
Modbus In	Communication	Serial	RS232, RS422A/485
Button operation	Function	BitWrite	Comm channel
		FixNoWrite	
Digital operation	-----	-----	

Sending is not allowed if the GX/GP/DX recorder version differs from the DAQStudio screen version. ►Section 2.4

The extension of data which are sent from this software to the GX/GP recorder is GCD, GCS, and PNG. For the DX recorder, it is CDC, CDS, and bmp.
The file name is as shown below.

GX/GP

Custom01.GCD to Custom30.GCD:	Image data.
Setting.GCS:	Settings of the GX/GP recorder.
Arbitrary_name.png:	The image file assigned to the component. When saved in the same folder as screen data, it is written to the internal memory of the GX/GP.

DX

Internal1.CDC to Internal3.CDC:	Written to the root directory of the internal memory of the DX recorder.
External1.CDC to External25.CDC:	Written to the CF card inserted into the DX recorder.
Arbitrary_name.bmp:	If saved to the same directory as the screen data, it is written to the internal memory of the DX recorder.

Display data can be sent from DAQStudio to GX/GP recorders with release number R2 and later and DX recorders with release number R3 and later.
Display data for DX1000 can only be sent to DX1000. Display data for DX2000 can only be sent to DX2000. Display data for GX10/GP10 can only be sent to GX10/GP10. Display data for GX20/GP20 can only be sent to GX20/GP20. Please send display data corresponding to the equipment.

Cautions in regard to the display processing time by the GX/GP/DX recorder

Some time may be required until the created display data are displayed by the GX/GP/DX recorder. In such a case, saving of measuring data and output of communication data are performed normally, but attention should be paid to the following.

- Do not operate keys until display processing has been completed.
- Even if event phenomena of event actions occur, event processing may not be started until completion of display processing.
- Web screen updating may be delayed.

5.1 List of Messages

Messages may be displayed on the screen during use.

Error message

Code	Message	Handling Methods/Explanation	Refer to
E0004	Invalid License number.	Please enter a correct license number.	—
E0250	Failed to start Adobe Reader.	Adobe Reader 7.0 or later is required to view the user's manual. Check whether Adobe Reader is installed.	—
E8001	Connection error, please check communication setting!	Please use System environment to confirm that the communication settings (IP address/host name, user name, password) with the connection object equipment are correct.	Section 4.1, Section 4.2
E8002	The connected device is not supported!	The following causes can be assumed. Please confirm the connected equipment. • The equipment is not GX10/GP10/GX20/GP20/DX1000/ DX1000N/DX2000. • The GX10/GP10/GX20/GP20 release number is not R2 or later. • The release number of DX1000/DX1000N/DX2000 is not R3 or higher.	Section 4.1, Section 4.2
E8003	Receive failed!	The following causes can be assumed. Please check. • Communication with the GX/GP/DX is not normal. • The GX/GP/DX's FTP server function is On. • An SD card is inserted, or a CF card is inserted in the DX recorder. Also make sure that the SD card or CF card has free space. • If Multilogin is On, communication will always result in an error when users logged on via key login have communication connections open and have moved to a mode other than Operate mode.	—
E8004	Send failed!	The following causes can be assumed. Please check. • Communication with the GX/GP/DX is not normal. • The GX/GP/DX's FTP server function is On. • An SD card is inserted, or a CF card is inserted in the DX recorder. Also make sure that the SD card or CF card has free space. • If Multilogin is On, communication will always result in an error when users logged on via key login have communication connections open and have moved to a mode other than Operate mode. • If the version of the connected DX recorder is earlier than 4.11 and the recorder is a model with the /AS1 option, memory start is in progress. • The same user is logged in to the main unit. (If Multilogin is OFF, an error occurs if another user is logged in.) • Settings are being entered on the main unit.	—
E8005	Failed to save graphic file!	The following causes can be assumed. Please check. • The save object disk is broken. • No permission has been given for file and folder writing/ reading. • The empty capacity of the disk is not sufficient.	—
E8006	Failed to read graph file!	The following causes can be assumed. • The object data are being used for another program. • The present user does not have the authority to access the file. Confirm the file attributes. • The file is broken. Confirm the file attributes.	—
E8007	Invalid folder name!	The entered folder name is not correct. Enter a correct folder name.	Section 2.12

Continued on the next page

5.1 List of Messages

Code	Message	Handling Methods/Explanation	Refer to
E8008	Failed to send! The machine's hardware is different.	• Check if a GX10/GP10 screen construction file has been sent to GX20/GP20 or vice versa. • Check if a DX1000 screen construction file has been sent to DX2000 or vice versa.	Section 4.1
E8009	Login failed!	The following causes can be assumed. Please check. • Wrong user name, user ID, or password. • The GX/GP/DX unit is connected by different software. • If Multilogin is Off, users are already logged in. • Password has expired. • The number of failures exceeded the previously specified number.	—
E8010	Failed to paste all or some parts.	The following causes can be assumed. Please check. The max. number of components which can be created on one screen has been exceeded at the time of pasting.	Section 3.2
E8011	Failed to create folder!	Check for normal disk capacity and file system.	—
E8012	Failed to convert image file.	The following causes can be assumed. Please check. • The disk is broken. • There is not enough free space in the directory. • The present user does not have the authority to access the file. • An image not supported by the software was converted. • When saving the image to a different name, the number appended to the file name exceeded 7000.	—
E8013	There is no media card in the recorder.	Check whether the CD card has been inserted into the GX/GP/DX recorder.	Section 3.34 Chap 4
E8014	Failed to copy image file.	The following causes can be assumed. Please check. • The disc is corrupt. • There is insufficient space in the directory. If there is insufficient space, free up some space. • The current user does not have permission to access the file, and read/write permission for files and folders has not been granted. • If copying an image file not supported by the GX/GP/DX recorder, copy an image file that can be displayed by the GX/GP/DX recorder. • When copying an image to a different name, if the number appended to the file name would exceed 7000, delete unneeded images.	Section 3.34
E8015	Cannot send due to firmware version mismatch.	Make sure the DAQStudio screen version is the same as the GX/GP/DX recorder firmware version (release number).	Section 2.4
E8044	Display %s data has exceeded 1MByte. Send failed!	Delete some of the image construction data, so that the data is 1 MB or less.	—
E8045	Display [display number] data has exceeded 1MByte. Save failed!	Delete some of the image construction data, so that the data is 1 MB or less.	—

Warning message

Code	Message	Description	Refer to
W8031	Do you want to save the changes of display?	The screen changes have not been saved. Select Save (OK)/Don't save (Cancel).	Section 2.1
W8032	All display will be deleted and selected display will be shown. Is it OK?	Select discarding of the present screen and creation of a new screen (OK)/No (Cancel).	Section 2.5
W8033	Is it OK to delete [displayname]?	Select Delete screen/No. The [Screen name] is the deletion object data name selected in the Screen list.	Section 2.9
W8034	Send display data to recorder. Is it OK to save display data in recorder?	Screen construction data are sent to the GX/GP/DX unit.	Section 2.9
W8035	Receiving display data from recorder. Is it OK to discard recent display and create new ones?	Screen construction data are received from the GX/GP/DX unit.	Section 4.1
W8036	Is this OK to discard [displayname], and paste another one to here?	Screen name is the Screen name selected in the Screen list. This screen is discarded and the screen is pasted to this position.	Section 2.9

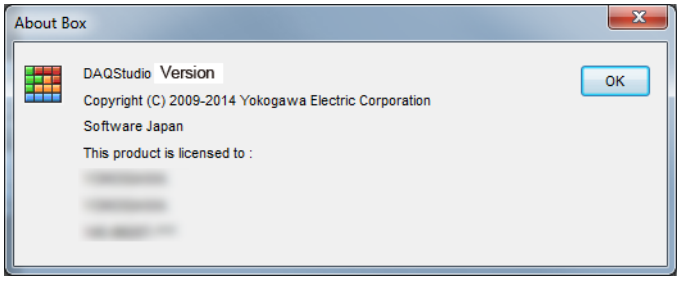
Continued on the next page

Code	Message	Description	Refer to
W8037	The specified file already exists in the image folder. Choose one of the following options.	Specify the copy action.	Section 3.34
W8038	Because “filename” is longer than xx characters, it will be copied to a different file name. Is this OK? (“filename” is the specified file name. xx is the maximum number of characters alowed for the file name.)	Copy the file specified in the image browsing dialog box to a different name using no more than the maximum number of characters.	Section 3.34
W8039	A image file that the recorder does not support exists. Are you sure you want to send the files?	Move the images that are not supported by the recorder to another folder, or delete them. If OK to send, click [OK].	Section 4.2
W8040	When you convert to the specified version display, all unsupported components and attributes, display data will be lost. Are you sure you want to continue?	Confirm whether it is OK to lose the components that are not supported by screen versions that are earlier than the current screen version. The attributes or components will also be lost.	Section 5.3
W8041	All displays will be discarded and a new display will be created. Are you sure you want to continue?	If you do not wish to change or delete a created screen, click [Cancel], and then save the screen data.	Section 2.5
W8042	Settings that the recorder does not support are included. Are you sure you want to send the settings?	There are settings that are not supported by the GX/GP/DX recorder. Determine whether you will send all files before performing the procedure.	—
W8043	The image file that the recorder does not support. Are you sure you want to convert the file?	If you want to convert the image, select [OK]. If you select [Cancel], the image file will not be converted. Select another file.	—

5.2 Version Information

Procedure

1. Select **Help > Version Information** from the menu bar or click the **Version Information** icon.
   The version information is displayed.



Explanation

Data incompatible due to a different DAQStudio version

As long as it is the same language, DAQStudio version R1.01 and R1.02 data are mutually compatible. When loading R1.01 and R1.02 data, the sizes of the components are adjusted.

Line component: If the start and end points overlap, adjust the end point to 1 dot along the X axis away from the start point.

Components other than lines: If the minimum width and height is less than 2 dots, change it to 2 dots.

Depending on the software version, the indicated component attribute names may differ.

DAQStudio version	Attribute name	Corresponding Component
R3.01.01	BG transparent	Batch name
	Decimal place	Commnication input, Modbus in
R2.01.01	Batch group number	Screen, Alarm list, Message list, Trend, scale
R1.02	Previous batch number	

5.3 Changing the Screen Version

When you switch the screen version, the screen construction data is converted to the new version.

When switching from DXAdvanced R3 to DXAdvanced R4.01 or R4.11

- R3 component attributes remain the same.
- Component attributes that became available for setting in R4.01 or R4.11 are set to their defaults.
- [2nd span Lower] and [2nd span Upper] settings of trend and scale components can now be set up to 1 decimal place.

When switching from DXAdvanced R4.01 to DXAdvanced R4.11

- R4.01 component attributes remain the same.
- Component attributes that became available for setting in R4.11 are set to their defaults.

When switching from DXAdvanced R4.01 or R4.11 to DXAdvanced R3

- Components not supported in R3 are deleted.
- The [Depend ID]'s of components dependent on other components not supported in R3 are set to [None]. - Attributes of components not supported in R3 are deleted. The [Vertical display] of components whose attributes are deleted (Labels, Tag no., Tag comment, Units, SpanL, and SpanU) is changed to [Off] (horizontal display).
- Attributes of components not supported in R3 are deleted. The method of plotting is changed for components whose attributes are deleted (trend and scale).
- For the trend component's [2nd span Lower] and [2nd span Upper] settings, the number of decimal places is changed to 0, and the number after the decimal point is rounded.
- For the scale component's [2nd span Lower] and [2nd span Upper] settings, the number of decimal places is changed to 0, and the number after the decimal point is rounded.
- If not displaying the status area in a R4.01 screen or R4.11 screen, it is displayed. Components in the status area are repositioned.
  When switching the status area from [No display] to [Display], components overlapping the status area move into the screen display area. Also, if the height of a component exceeds the maximum value for the screen construction area, the height is changed to the maximum value.

When switching from DXAdvanced R4.11 to DXAdvanced R4.01

- Components not supported in R4.01 are deleted.
- The method of plotting is changed for components whose attributes are deleted.

When switching from GX/GP R2 to DXAdvanced R4.11, R4.01, or R3

- Unsupported components and component attributes are deleted.
- The method of plotting is changed for components whose attributes are deleted.
- If a channel number or internal switch number does not exist, it is changed to the smallest number of each device.

When switching from DXAdvanced R4.11, R4.01, or R3 to GX/GP R2

- Added attributes are set to their default values.

Component differences by screen version

Component	DXAdvanced R3	DXAdvanced R4.01, R4.11
System icon		New
Group name		New
Batch group number		New
Batch name		New
Time label		New
Memory bar		New
Modbus In		New

Component	DXAdvanced R4.01, R4.11	GX/GP R2
Tag comment	Tag comment	Tag string
Span U	Span U	Span
Span L	Span L	Span
Switch	Switch	DOIntSwitch
Push button	Push button	Button operation
Comment box	Comment box	Delete
Comment block	Comment block	Delete
Comm In	Comm In	Digital operation
Batch group no.	Batch group no.	Delete
User name		New
Time label	Time label	Date Time
Modbus In	Modbus In	Digital operation
Alarm list	Alarm list	Alarm summary
Message list	Message list	Message summary
Bitmap	Bitmap	Image

Attribute differences by DX screen version

Component	Attribute	DXAdvanced R3	DXAdvanced R4.01, R4.11
Screen	Status area		New
Labels	Vertical display		New
Tag no.	Vertical display		New
Tag comments	Vertical display		New
Unit	Vertical display		New
SpanL	Vertical display		New
SpanU	Vertical display		New
Bitmap	Trend grid mode		New
Line	Trend grid mode		New
Trend	Margin		New
	Display group switching		New
	Time interval		New
	Time grid display		New
	Scale Grid Display		New
	2nd span Lower	No decimal place setting	One decimal place can be set
	2nd span Upper	No decimal place setting	One decimal place can be set
Scale	Indicator type		
	Unit		
	Margin on both sides of Span		
	Display group switching		
	2nd span Lower	No decimal place setting	One decimal place can be set
	2nd span Upper	No decimal place setting	One decimal place can be set

Component	Attribute	DXAdvanced R4.01	DXAdvanced R4.11
Batch name	BG transparent		New
Communication input	Decimal place		New
Modbus input	Decimal place		New

For the differences from GX/GP R2, see chapter 3.

Index

Numeric

2nd span ... 3-9

A

adding a display ... 2-19
arrangement bar ... 2-4
arrangement menu ... 2-11
arranging ... 2-47, 2-48, 2-49, 2-50, 2-51, 2-52, 2-54
 bottom ... 2-47
 height ... 2-50
 horizontal center ... 2-46
 left ... 2-46
 right ... 2-46
 to back ... 2-52
 to bottom ... 2-51
 to front ... 2-52
 top ... 2-47
 to top ... 2-51
 vertical center ... 2-47
 width ... 2-50
assigning a channel ... 2-37
assigning an alarm ... 2-37
attributes
 alarm indicator ... 3-28
 alarm list ... 3-65
 alarm summary ... 3-65
 bar graph ... 3-17
 batch group number ... 3-39
 batch name ... 3-41
 button operation ... 3-49
 circle ... 3-83
 comment block ... 3-63
 comment box ... 3-61
 communication input ... 3-56
 DateTime ... 3-36
 digital ... 3-12
 digital operation ... 3-58
 DOIntSwitch ... 3-53
 group name ... 3-44
 label ... 3-47
 line ... 3-79
 message list ... 3-68
 message summary ... 3-68
 Modbus In ... 3-58
 push button ... 3-49
 rectangle ... 3-81
 scale ... 3-76, 3-78
 simple bar graph ... 3-14
 simple digital ... 3-10
 span value ... 3-26
 switch ... 3-53
 tag no. ... 3-20
 tag string ... 3-22
 time label ... 3-36
 trend ... 3-71
 unit ... 3-24

B

batch/group list ... 2-7
bitmap folder ... 2-8

C

common attributes ... 3-5
communication menu ... 2-11
component attributes ... 2-54
component bar ... 2-4
components
 alarm indicator ... 2-27
 alarm summary ... 2-33
 bar graph ... 2-26
 batch group number ... 2-29
 batch name ... 2-29
 bitmap ... 2-36
 button operation ... 2-30
 DateTime ... 2-29
 digital ... 2-25
 DO/internal switch ... 2-31
 group name ... 2-28
 image ... 2-36
 label ... 2-29
 memory bar ... 2-28
 message summary ... 2-33
 numeric operation ... 2-32
 scale ... 2-35
 simple bar graph ... 2-25
 span value ... 2-27
 system icon ... 2-28
 tag no. ... 2-27
 tag string ... 2-27
 trend ... 2-34
 unit ... 2-27
components for channel assignment ... 2-24
components for comment display ... 2-32
components for list display ... 2-33
components for static image display ... 2-36
components for trend display ... 2-34
components, notes on creating ... 2-21
components with action functions ... 2-30
contraction ... 2-40
creating components ... 2-20, 2-21, 2-22, 2-23

D

deselection ... 2-40
diagram Components ... 2-24
display list area ... 2-5
distribute horizontally ... 2-48

E

editing
 add ... 2-44
 cut ... 2-43
 delete ... 2-44
 deselect ... 2-40
 move ... 2-41
 paste ... 2-43
 select ... 2-40
edit menu ... 2-10
error message ... 5-1
exit ... 2-2

F

file menu 2-10
font 3-5
frame 3-6

G

grid menu 2-10
grid setting 2-13
group list 2-7

H

help menu 2-11
host name 4-4

I

icons of component bar 2-22
ID No. 3-3
IP address 4-4

M

magnification 2-40
main screen 2-3
menu bar 2-3
messages 5-1, 5-2, 5-3
monitor screen creation examples 1-2
movement 2-40

N

number of components 3-3

O

open a file 2-16
overlap restriction 2-21
overview 1-1

P

PC system 1-4

R

receive 4-2
recorder release number 2-12
reference component 2-40, 2-42
revisions (of user's manual) i

S

save a file 2-17
scale display components 2-35
screen attributes 2-53, 3-1, 3-2
screen creation flow 1-3
Screen menu 2-11
screen version, changing 5-5
screen version, switching 2-14
selection 2-40
send 4-4
SET (Set values) 3-5
software license ii
start 2-1
status display components 2-28
summary display component 2-33
sync act (synchronize action) 3-8

T

tool bar 2-3
trademarks i

V

version information 5-4
view menu 2-10

W

warning message 5-2
work area 2-5